A STRUCTURAL ANALYSIS OF NURSING CONTINUING EDUCATION ORGANIZATIONS AND PROGRAMS

An abstract of a Dissertation by
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Purpose of the study. This study was conducted to determine the components of organizations whose mission is nursing continuing education.

Method. The study was conducted in two phases. In Phase I, 1,134 currently registered nurses were randomly selected and asked by questionnaire which was the most valuable nursing continuing education program which they had attended this past year. Further, they were asked to identify the organization which offered that program. Seventy-two percent (813) nurses responded.

In Phase II, twenty-eight organizations were randomly selected from the seventy-one different organizations identified in Phase I. The twenty-eight organizations fit into eleven different categories. Using James Price's collected tools, the following organizational variables were assessed, using an interview tool:

Administrative Staff	Mechanization
Autonomy	Motivation
Centralization	Bases of Power
Communication	Routinization
Coordination	
Dispersion	Satisfaction
Effectiveness	Size (Budget, Personnel)
Formalization	Span of Control

Findings. Based on the values for all of the variables except Autonomy, Centralization, Formalization, and Mechanization, the researcher failed to reject the hypothesis of no difference for the organizations that were a part of this study. All organizations studied were deemed effective by the respondents in Phase I of this study. A conceptual model, "The Anatomy of an Organization," was created for grouping the variables for further analysis of the selected organizations. Further, the organizations were grouped by primary purpose into educational and non-educational for analysis. Finally, the organizations were analyzed on the major concepts of the model in groups according to multi-purpose, limited purpose, and single purpose organizations.

In the different kind of analyses done, there were no great differences found in the various types of effective organization. Structure and motivation were the variables that were shown to be the most important variables in the organizations in this study.

A STRUCTURAL ANALYSIS OF NURSING CONTINUING EDUCATION ORGANIZATIONS AND PROGRAMS

A Dissertation

Presented to

The School of Graduate Studies

Drake University

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Education

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by

Juanita R. Theile

February 1981

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Chapter 1

PROBLEM, PURPOSE, AND BOUNDARIES

Introduction

Exponential growth of knowledge and technology in the modern world makes continuing education a part of the life of every professional. In order for the professional to keep abreast in a field of work, there must be continued learning in some form.

Continued learning is provided by different modalities which include workshops, short courses, evening college, and inservice. All educational courses have common fundamental structures which include objectives, curriculum, content, teaching-learning strategies, physical resources and organization. Knowles stated that the delivery organization provides the environment for adult education and the quality of student learning that takes place in an organization is affected by the nature of the organization.[1]

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[1]Malcolm S. Knowles, The Modern Practice of Adult Education (Chicago: Associated Press Follett Publishing Company, 1970), p. 59.

The organization, as identified by Knowles, is seen to be the foundation for the educational enterprise because it creates the milieu. It is critical, then, to create the best organization possible so that as an educational program is planned, the environment can enhance that program.

Mintzberg recognized that every organized human activity--from pot making to the placing of a man on the moon--has two basic and opposing aspects; namely, the division of labor into various tasks and the coordination of these tasks to accomplish the purpose of the organization. Mintzberg stated: "The structure of an organization can be defined simply as the sum total of the ways in which it divides its labor into distinct tasks and then achieves coordination among them."[1]

An organization is then part of every human activity when more than one person is involved in that activity. The educational institution itself or as a subsystem of a larger institution has some type of organization. Price provided an additional perspective of interest when he defined organization as a social system with a specific purpose.[2]

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[1]Henry Mintzberg, The Structuring of Organizations (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1979), p. 2.

[2]James L. Price, Organizational Effectiveness: An Inventory of Propositions (Homewood, Illinois: Richard D. Irwin, 1968), p. 2.

The major problem considered by this researcher was the study of the components of an organization whose mission is nursing continuing education. The desired outcome of the study was to identify those components common to effective nursing continuing education programs. It is hoped that by this process the efforts of this researcher and others to design nursing continuing education programs will be significantly assisted.

Statement of the Problem

Essential components of organizations whose mission is nursing continuing education have not been isolated in recent literature. This is not unusual because the first tasks that concern educators and administrators are the objectives and the curriculum for the continuing education program. But as Knowles has indicated, the organization itself affects the quality of education; therefore, it is important that the educator/administrator also be aware of and consider carefully the organization which will offer the educational program.

Organizations whose mission is nursing continuing education were studied to answer the following research questions:

1. What are the components of organizations whose mission is nursing continuing education and who deliver effective education programs?

2. What effect does size have on these components?

A random sample of currently registered nurses was asked to identify a program that was most valuable to them (i.e., valuable, meaning that program which helped the nurse to improve nursing practice and/or improve the nurse's ability to perform in the nursing role) and the organization which offered the program deemed valuable.

It is also hypothesized that the respondent's attitude toward mandatory continuing education may impact responses to the first question. (Required continuing education for nurses in Iowa has been in effect for one year, effective April 1, 1979.) Therefore, there are subquestions which were considered in order to sort out, control, the possible impact attitude:

1. A) Is there a relationship between positive feelings about mandatory nursing continuing education and the organization identified?
   B) Is there a relationship between negative feelings about mandatory nursing continuing education and the organization identified?
2. A) Is there a relationship between positive feelings about mandatory nursing continuing education and the subject matter identified as being valued by the nurse?
   B) Is there a relationship between negative feelings about mandatory nursing continuing

education and the subject matter identified as being valued by the nurse?

3. Is there a relationship between the respondent's basic level of nursing education and feelings toward mandatory continuing education?
4. Is there a relationship between the respondent's highest level of education and feelings toward mandatory continuing education?
5. Is there a relationship between basic level of education and type of organization identified?
6. Is there a relationship between highest level of education and the type of organization identified?

There may be some ex post facto questions that will become evident as the data are analyzed.

Significance of the Problem

Continuing education and/or lifelong learning is seen to be a fact of life. It is viewed by professional leaders as a sine qua non of being able to live effectively in a modern world or to function as an effective professional. This is of grave importance when considering the health care professions, particularly nursing. This profession demands clinical expertise that has up-to-date knowledge and skills. A method of dealing with obsolescence is for the professional to continue learning via various strategies which are grouped under the rubric of continuing

education.

The present literature holds that the purpose of continuing education is to assist the professional to keep abreast of change in his/her discipline, and ultimately to perform more effectively as a professional. Spin-offs such as improved patient care, better understanding of self and others, and greater ability to cope with change are important but are not the focus of this study.

This study was seen by this researcher to be long overdue in the world of education. Models of teaching-learning, curriculum development, and various other sophisticated educational designs have been generated over the years. Yet, little has been done in recent years to look at the organizational foundation upon which all these superstructures, however sophisticated, have been built.

Most educational endeavors start with what the program will or should be: the philosophy, the curriculum, the writing of objectives, the acquisition of the physical resources. However, the most important first step of administrators and educators should be to look critically at the organization that should exist so that they could produce an effective program. This is based on Knowles' premise of the role of the organization in the educational process.

What are these critical elements of an organization? This was the purpose of this study. It would help all educators to look critically at the organization and its elements

for better understanding of the environment in which they hope to create effective teaching-learning strategies. As a result, the planning of continuing education programs would give significant, if not equal, consideration to the organizational factors along with programmatic issues.

According to Price[1] there is limited research concerning a macroview of organizations. Rather, research has been done on various aspects of organizations, i.e., conflict-management in organization, size and management, leadership and power in organizations, motivation theory and organizations. There is a need for a wholistic view of an organization. It is as though each researcher has another view of "the elephant." There is a need to have the whole view in order to better understand the parts and their relationship to each other and to the whole picture.

Therefore, continued research and understanding of organization are important for an organization to be effective in its mission. This is important so that the administrator/educator does not perceive the perspective and focus of one component of an organization as more important than another and thereby jeopardize the mission of that organization.

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[1]James L. Price, Handbook of Organizational Measurement (Lexington, Mass.: D. C. Heath & Company, 1972), p. 1.

Design of the Study

This study, through a two-stage survey research, helped identify the critical components of organizations. In the first stage of the study, a questionnaire was sent to a randomly selected sample of registered nurses. The main question put to these nurses was: "What continuing education program which you deemed most valuable did you attend this past year and what organization provided that program?" In the second stage of the study, the researcher interviewed a selected sample of directors of the identified organizations, using a tool, to help identify the basic components of the organizations whose mission is nursing continuing education. The instruments utilized appear in the appendices.

Type of Research

The research was a survey design which gathered attitudinal and descriptive data. Babbie stated that survey research is probably the best method available to the social scientist interested in collecting original data for purposes of describing a population too large to observe directly.[1]

The unit of analysis was nursing continuing education organizations. Variables which were used to describe

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[1]Earl R. Babbie, The Practice of Social Research (2d ed.; Belmonte, California: Wadsworth Publishing Co., 1979), p. 316.

organizations were selected from James Price's Handbook of Organizational Measurement. He stated that there is a need for standardization of measures in the studying of organizations.[1] Permission to use the various tools in the Handbook was requested and received from the publisher (see Appendix).

Assumptions and Limitations

Assumptions

Two basic assumptions were made in this study:

1. The responses received from the respondents are biased by possible other factors beyond the scope of the study. Any biases having impact would be neutralized by the random selection.
2. Satisfaction of the participants as indicated by their identifying the program of most valuable to them was used as a measure of an effective organization (see Figure 1).

Figure 1 is a conceptual model which shows the independent variables which comprise the educational enterprise, namely: personnel, teaching-learning strategies, curriculum and the organizations' structure and process. All of these produce the continuing education program, the intervening variable. The intended result of the education

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[1]Price, Handbook of Organizational Measurement, p. 1.

Conceptual Model

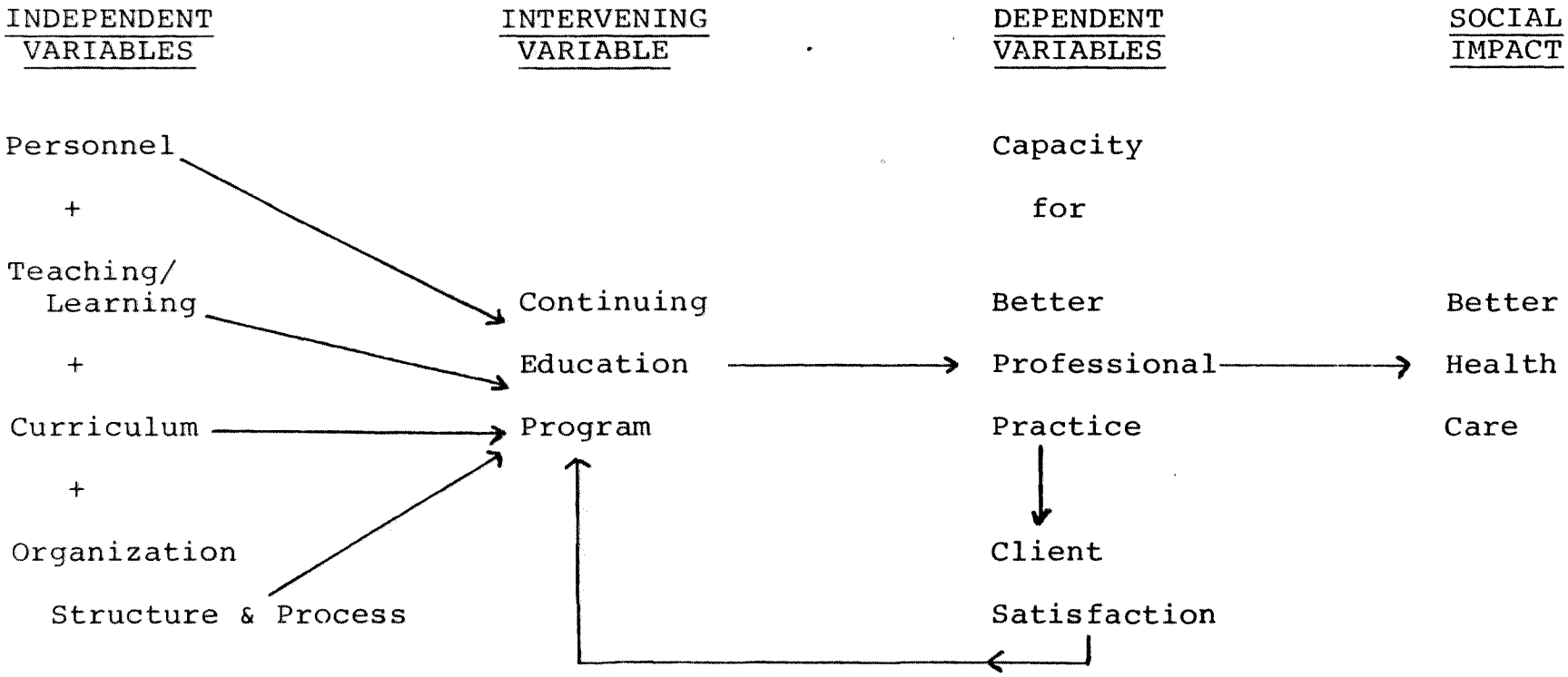

Figure 1. Figure showing the independent, intervening, dependent variables and the resulting social impact. Client satisfaction (Participant) is one measure of an effective continuing education program.

WHERE: Client Satisfaction = f(quality of program + perceived increase in capacity for better professional practice)

program is to provide the learner with the capacity for better professional practice which causes the learner to be satisfied. The capacity for better professional practice has the positive social impact of better health care. Therefore, as seen in the model, there is an indirect relationship between client or learner satisfaction and better health care.

Limitations

1. A random sample of 1,134 registered nurses from the total universe of 22,682 in the state of Iowa was used because of financial constraints and time allotted for research. However, this sample is viewed as adequately large to have statistical significance and to be representative of the total universe, as recommended by the research consultant.
2. The data obtained were at the nominal and ordinal levels.

The results are not generalized to other states but can speak to attitudes and the organizations the participants identified in Iowa.

Definition of Terms

Nursing continuing education is defined as a planned course of study which is taken after the basic preparation in nursing.

Organization "is a collectivity with relatively identifiable boundary, a normative order, authority ranks, communication systems, and membership coordinating systems; this collectivity exists on a relatively continuous basis in an environment and engages in activities that are usually related to a goal or set of goals."[1]

Basic education in nursing is that educational program which prepares the person for successfully passing the licensure examination which allows the person to use the legal title of registered nurse. Basic programs may be two-year associate degree, three-year diploma or four-year baccalaureate degree.

Common components or organizational characteristics to be used in this study are those identified and defined by James Price (1972) in his Handbook of Organizational Measurement.[2] Those selected include: size, span of control, administrative staff, power, autonomy, centralization, complexity, dispersion, effectiveness, formalization, mechanization, motivation, routinization, satisfaction and coordination. (These are defined in Appendix J utilizing Price's definitions.)

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[1]Richard H. Hall, Organizations Structure and Process (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1972), p. 9.

[2]Price, Handbook of Organizational Measurement, pp. 36-180.

Summary

The problem of what are the main components of an organization needs to be answered in order to create an effective organization whose mission is nursing continuing education. An organization in its most basic form exists when two people agree to accomplish some task.

The type of organization influences the end product; therefore, it is critically important to look at the organization. In order to identify the components in organizations and specifically in those whose mission is nursing continuing education, this study was undertaken.

Organization of the Remainder of the Dissertation

Chapter 2 contains a review of the literature which deals with a history of nursing continuing education, present-day approaches and requirements for nursing continuing education, rationale for continuing education, components for a nursing continuing education program, study of organizations, and structure of organizations. The studies are compared and contrasted, and the results of the studies summarized.

Chapter 3 discusses the development of instruments, data collection and analysis of data.

Chapter 4 presents the data and the findings.

Chapter 5 concludes with the summary, discussion of findings, implications, conclusions and recommendations.

Chapter 2

REVIEW OF RELATED LITERATURE

This chapter is limited to the discussion of other views on issues presented. In Chapter 3 the concepts, definitions and operational definitions to be utilized will be presented.

Adult Education

Adult education is a phenomenon that has been around for many years. Hiemstra stated that

> historians have long known and written about the educational pursuits of the adult person. The notable societies that developed in Greece, Rome, Europe, and Great Britain facilitated study, expression in the arts and personal growth for the elite or privileged person through his or her life.[1]

In America, one of the earliest known adult educational groups was the "Junto, a discussion club started by Benjamin Franklin and a few of his friends."[2] The lyceum movement in the early 1800's was "another important contributing force to the development of adult education in

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[1]Roger Hiemstra, Lifelong Learning (Lincoln, Nebraska: Professional Education, 1976), p. 18.

[2]Ibid.

the United States."[1] This movement was started by Mr. Josiah Holbrook in Connecticut. Lyceums were local study groups with the purpose of facilitating self-improvement of the participants. Hiemstra believed that this movement influenced the present day Great Books study groups, speakers' bureaus, and local service clubs.

Hiemstra saw that the Chautauqua movement which, "developed in the late 1800's, was also an adult education pioneer effort that eventually affected small towns and rural areas through the United States."[2] This movement originally was an educational program for Sunday School teachers on Lake Chautauqua in New York.

The first International Conference on Adult Education was sponsored by UNESCO and took place in Elsinore, Denmark, in 1949.[3] At this first conference the delegates viewed adult education as a voluntary approach to adult education as opposed to a governmental organized approach. Then eleven years later a second conference was held in Montreal, Canada (1960), where the theme was "Adult Education in a Changing World." This set a new tone in adult education. Here adult education was seen as a lifelong process and also as a goal for future government policies. In the final report

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[1]Ibid.

[2]Ibid.

[3]John Lowe, The Education of Adults, World Perspective (Toronto: The UNESCO Press, 1975), p. 9.

it was stated:

> Nothing less will suffice than that people everywhere should come to accept adult education as normal; and that governments should treat it as a necessary part of the educational provision of every country.[1]

Then in 1972 the Tokyo International UNESCO Conference had as its theme "Adult Education in the Context of Lifelong Learning." The reports from the eighty-four member states generally spoke to placing of "adult education within the total education process."[2]

The definition of adult education has been an object of controversy in this world arena. First it was seen as any education an adult pursues who no longer attends schools. Because this definition was not appropriate for developing countries where compulsory education was not possible, the following definition was developed:

> Organized programmes of education provided for the benefit of and adapted to the needs of persons not in regular school and university system and generally fifteen or older.[3]

The terms adult education and lifelong learning were used by some authors interchangeably, indicating that some resolution of the issue needed to be done. Cropley believed that it was important to distinguish between these two terms. He saw adult education to be a "more traditional

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[1]Ibid., p. 10.

[2]Ibid., p. 12.

[3]Ibid., p. 22.

process,"[1] while

> a great deal more is implied by the notion of lifelong education. Lifelong education is more than an extension of adult education to a wider audience. Nor is it only the provision of more upgrading classes for workers who are barred from further advancement in their jobs by inadequate skills.[2]

Rather, Cropley saw

> a lifelong education-oriented system would, in fact, subsume adult education as it currently exists, while simultaneously breaking down the distinctions between adult education and any other kind of education.[3]

Knowles wrote earlier about the concept of lifelong learning in terms of defining education where he identified "that it is no longer functional to define education as a process of transmitting what is known; it must be defined as a lifelong process of discovering what is not known."[4] Houle stated:

> Adult education is the process by which men and women (alone, in groups, or in institutional settings) seek to improve themselves or their society by increasing their skill, knowledge or sensitiveness; or it is any process by which individuals, groups or institutions try to help men and women improve in these ways.[5]

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[1] A. J. Cropley, Life Learning, A Psychological Analysis (Toronto: Pergamon Press, 1977), p. 19.

[2] Ibid., p. 20.

[3] Ibid.

[4] Knowles, p. 38.

[5] Cyril Houle, The Design of Education (San Francisco: Jossey-Bass, Inc., 1972), p. 32.

Lifelong education is seen to be a modern necessity because of various factors. Cropley wrote that there are powerful social forces at work today which urge that all societies and all strata of each society should have full opportunity to realize their own potential.[1] He saw these social forces to be: economic, social, changing role of the family, changing social roles, technological change, vocational factors, needs of adults and needs of young children (outside of the normal school years). Houle summed up the critical need for continuing learning whether it is called adult education or lifelong learning. He wrote:

> professions desperately need the objectivity of continuing education that evokes not only new motivation to do old things, but also the vision to alter the practice of one's profession, the courage to seek to transform the institutional purposes and structures in which one is embedded, and the simple inspirations of finding fresh points of view.[2]

Therefore, whether a person is a professional or a non-professional, adult education and/or lifelong learning helps to remove one from the routines of work and living and gives one a chance to explore new paths to find new vistas, if not new worlds.

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[1]Cropley, p. 22.

[2]Cyril O. Houle, Continuing Learning in the Professions (San Francisco: Jossey-Bass Publishers, 1980), p. 123.

Nursing Continuing Education

There is a recognized need for any profession to keep abreast with advancing technology and the changing needs of society. Nursing has demonstrated this by supporting the passing of laws in thirteen states (California, Colorado, Florida, Iowa, Kansas, Kentucky, Massachusetts, Minnesota, Nebraska, Nevada, New Mexico, South Dakota and Washington).[1]

The Iowa Board of Nursing [Section 5.1(8) of the Code of Iowa] stated:

> ...nursing continuing education [means] that education which is obtained by a professional or occupational licensee in order to maintain, improve, or expand skills and knowledge obtained prior to initial licensure to develop new and relevant skills and knowledge. This education may be obtained through formal or informal education practices, self-study, research, and participation in professional and technical, and occupational societies.[2]

This language is typical of the states where legislation has been implemented.

Hayter stated that consumers are becoming involved in the planning and evaluation of health services; and many health disciplines, including nursing, are developing a

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[1]Editorial, C E Focus, A Bimonthly Journal Focusing on Continuing Education in Nursing, July/August, 1979, p. 4.

[2]Iowa, Iowa Board of Nursing, Section 2. 5.1(8) (1977).

system of internal controls to ensure high quality care.[1] She goes on to say that as the result of this increased awareness of the public and of the nursing profession there has been more emphasis on continuing education. Hayter identified the need for employers to offer continuing education but saw "the individual must still assume responsibility for his own continued learning."[2] She recognized that continuing education was taking various formats when she wrote that "workshops, professional meetings, taking a short course...reading of journals...(viewing) of programmed units, tapes and films,"[3] are all acceptable forms of continuing education. Hayter wrote that continuing education was important for various reasons, some of which were: to keep abreast of changing procedures, new drugs, and accountability requirements. She saw continued learning as a mark of a professional, and if nurses recognized this, then nurses would continue their learning.

By law some states, as noted earlier, require nurses to have continuing education for relicensure. Why should nurses be required to attend nursing continuing education programs? Hayter expresses the values of continuing education which includes updating knowledge and improved

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[1]Jean Hayter, "Individual Responsibility for Continuing Education," Journal of Continuing Education for Nurses, IV (1973), 14.

[2]Ibid.

[3]Ibid.

practice. However, she identified the following various reasons which may influence nurses to not participate in continuing education:

1. Available opportunities for continuing education may not be convenient.
2. Available programs and materials may be inappropriate.
3. The extreme emphasis on degrees and formal education have deemphasized the value of learning on a continuing basis.
4. There may be implied criticism.
5. There may be no opportunity to use what is learned.
6. Nurses are (having)...conflict in role identity.[1]

Wolanin agreed with Hayter when she stated "education for nursing is a continuous process of confronting new frontiers of knowledge, for, as in any other field concerned with the welfare of human beings, practice must be based on a continuously expanding and updated body of knowledge."[2] Wolanin saw there are basic factors related to programming for continuing education which are needed to make the continuing education experience effective and more interesting to nurses. These factors are as follows:

-Specific, job-related content

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[1]Ibid., p. 33.

[2]Mary Opal Wolanin, "Factors Leading to Effectiveness of Continuing Education Programs," Journal of Continuing Education for Nurses, IV (1973), 14.

-Professional enrichment leading to professional activity on the part of the nurse as a professional in a group with common goals and purposes

-Multidisciplinary information

-Personal enrichment.[1]

Wolanin saw that programming should come from the various classes in the above taxonomy in order for nursing continuing education to be effective.

Blaney identified ten factors essential to an effective nursing continuing education program. These are:

1. Total commitment of faculty...
2. Recent assessment of the needs of nurses...
3. Minimum funding which allows for a full-time director and secretary...
4. Appointment of a director with qualification... master's level, teaching experience...
5. Viable small faculty committee...
6. Advisory board...
7. Commitment to all levels of nursing...(education)
8. Assure quality of workshop...
9. Initially set low fees...
10. Offer programs in a variety of settings...[2]

Wilson saw that the "professional's practice depends on a high degree of specialized knowledge, yet the

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[1]Ibid., p. 17.

[2]Doris R. Blaney, "From a Dream to Reality - A Continuing Education Program," Journal of Continuing Education in Nursing, IV (1973), 23.

increase in new knowledge is so rapid that the practitioner periodically must update the knowledge."[1]

Wilson also recognized the need for developing a system for nursing continuing education. She stated that

> effective planning must occur at all levels if the nurses' educational needs are to be met and resources properly utilized. Clearly, a well-planned and implemented system is necessary in order to meet the nurses' continuing education needs.[2]

Iowa recognized the need for its nurses to be current in knowledge and practice. Iowa also recognized the reluctance on the part of some nurses to participate in continuing education. Thus, Iowa passed the law requiring continuing education for relicensure.

Providing and/or requiring programs of continuing education alone may or may not result in improved practice of the nurse. There are several variables involved in providing an effective continuing education program. These variables were identified earlier. The most important variable as identified by Knowles is the need for an effective organization to be the modus operendi of that educational enterprise.

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[1]Jennifer Wilson, "The Agricultural Extension Model's Applicability to Continuing Education in Nursing" (EdD dissertation, Teacher's College, Columbia University, 1976), p. 4.

[2]Ibid., p. 8.

Knowles recognized that an organization is the vehicle for getting things done when he stated that an organization "is also a social system that serves as an instrumentality for helping people meet human needs and achieve human goals."[1] As was identified in Chapter I, Knowles saw the organization as one of the most important variables in a continuing education enterprise. The organization establishes the milieu of the education program.

Essert stated that within each organization or system there are "specialized subunits...formed to aid the system to accomplish its social purpose, each directly or indirectly involved in the administrative process."[2] He further said that there were only a few relatively autonomous schools for adult education. He saw that "the subunit of adult education is dependent upon the system and its administrative superordinate structure."[3] Subunits of larger organizations should reflect the larger organization and should have a relationship with varying degrees of autonomy. A closer examination of organizations

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[1]Knowles, p. 59.

[2]Paul L. Essert, Gale Jensen, A. A. Liveright, and Wilbur Hallenbeck, Eds., Adult Education Outlines of an Emerging Field of University Study (Washington, D.C.: Adult Education, 1964), pp. 177-178.

[3]Ibid.

in general will help in the understanding of the larger organization and thus any subunits.

Organization

Rushing and Zald stated that most theoretical approaches to the study of organizations emphasize one of two perspectives:

> One, technological and structural determinism, views organizational behavior as the result of organizational technology and social structure... decision makers can do little to alter organizational functioning...because this is determined primarily by technology and organizational structure. Such a view is best typified in Max Weber's conception of bureaucracy. The other perspective, typified in the human relations school and administrative science, is that organizations are the products of human behavior...especially decision making...at the administrative level, can significantly influence the functioning of organizations.[1]

Students of organizations, Thompson noted, "are confronted with many different fragments of theory which are presented as complete theories."[2] Thompson goes on to help clarify the picture for the researcher looking at organizations. He stated that

> organizations can be represented as a system of interrelated variables. In order to determine relationship, it is necessary to isolate and

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[1]William A. Rushing and Mayer N. Zald, Organizations and Beyond (Toronto: Lexington Books, 1976), p. 3.

[2]James D. Thompson, ed., Approaches to Organizational Design (Pittsburgh: University of Pittsburgh Press, 1966), p. 3.

> define the component variables in the relationship as a basis for their independent observation and measurement.[1]

What is an organization? Price defined organization "as a social system with specific purposes."[2] Further, Price saw that effectiveness of an organization was "the degree of goal-achievements."[3]

Perrow saw an organization from a different perspective than that of Price. He saw organization as an open system, a concept of considerable value when one attempts to gain a full understanding of organization behavior. From his perspective one should look at an organization by

> the way the organization is influenced by its environment, the impact of new sources of personnel recruitment on the structure and values of the organization, the role of technology in changing the structure and goals of the organization.[4]

In order to recognize the difference in an organization, one must find some way to deal with differences in and among organizations. Perrow stated plainly that "whether you are going to work in an organization or plan to do research concerning it, you must know what makes it

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[1]Ibid., p. 5.

[2]Price, Organizational Effectiveness: An Inventory of Propositions, p. 2.

[3]Ibid., p. 3.

[4]Charles Perrow, Organizational Analysis: A Sociological View (Belmont, California: Brooks/Cole Publishing Company, 1970), p. 2.

distinctive."[1]

Perrow, besides his emphasis on open systems, saw the importance of viewing organizations from a structural view, especially the role of leadership, together with the understanding of the variety of the types of organization (bureaucratic and nonbureaucratic) and how an organization is shaped by its environment.[2] Finally, Perrow saw that "organizations are tools to achieve various goals. To understand them fully, one must understand the goals they pursue."[3] Thus there are multiple ways to characterize, analyze, and categorize organizations, each of which adds to one's understanding.

Organization Measurement

Price stated that "there is little standardization of the measures used in studying organizations."[4] Because of this lack of standardization, the development of organizational theory is hindered. He further saw that "standardization of measures makes it easier for findings to be compared, and theory then to be developed."[5]

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[1]Ibid., p. 27.

[2]Ibid., p. 92.

[3]Ibid., p. 180.

[4]Price, Handbook of Organizational Measurement, p. 1.

[5]Ibid.

Price saw that most organizational measures are based on a "single piece of information rather than a combination of different pieces of information."[1] Price has compiled a taxonomy of twenty-two different organizational measures from the literature. He has defined these operationally and included suggested tools for each. Almost all of the measures he has identified are at the nominal and ordinal level.

The measures that Price selected were guided by the following seven a priori standards:

1. Preference was given to measures that use the organization as the unit of analysis.
2. Preference was given to measures that are used in an empirical study.
3. Preference was given to simple measures.
4. Preference was given to measures that present data about their validity and reliability.
5. Preference was given to multiple measures of a concept.
6. Preference was given to published measures.
7. Preference was given to measures that are related to precisely formulated concepts.[2]

This researcher accepted Price's standards as appropriate criteria for measures used in this study. Price identified that there is

> no set of concepts agreed upon by all--or even a large majority--of organizational researchers. Different researchers study different components

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[1] Ibid.

[2] Ibid., pp. 5-6.

> of organizations and no one has yet devised an agreed-upon frame of reference to direct this research.[1]

Organization Structure

Mintzberg wrote that structure seems to be at the root of many of the questions we raise about organizations. He further wrote that "five mechanisms (mutual adjustments, direct supervision, standard of work process, work outputs, worker skills) are the basic elements that hold an organization together."[2] Mintzberg identified what he believed to be the basic parts of an organization, shown in Figure 2. This figure shows that the top managers are in what he called the strategic apex. Coming down from the strategic apex are the middle line managers who are connected with the operating core. Flanked on either side are what he identified as the techno-structure and the support staff.[3]

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[1]Ibid., p. 7.

[2]Mintzberg, p. 9.

[3]Ibid., p. 20.

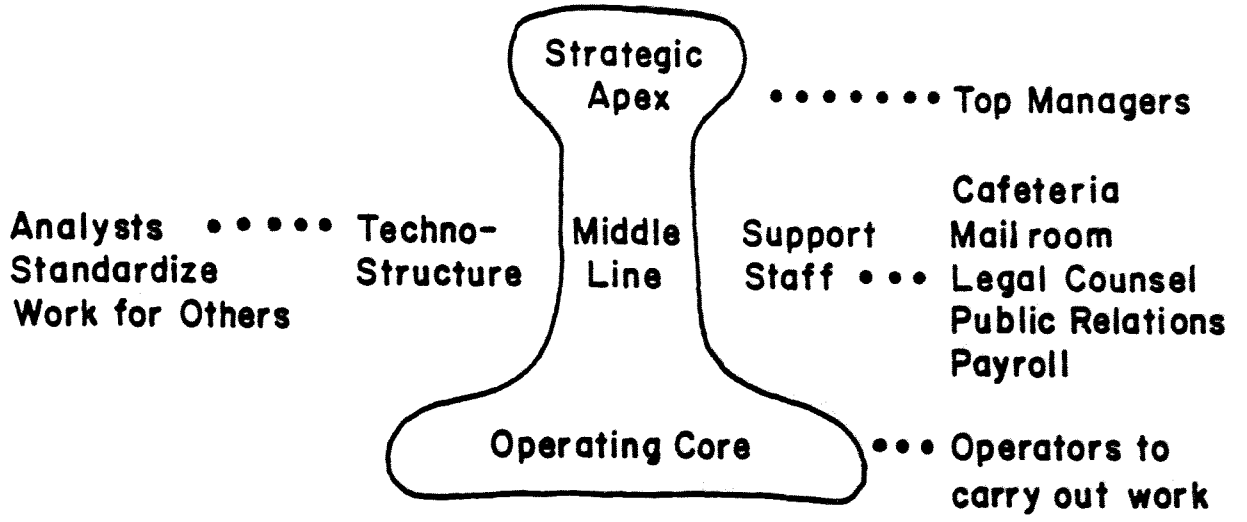

Figure 2. Figure showing Mintzberg's view of an organization's basic five parts and what is contained in each area.

Mintzberg's model takes on differing configurations depending on the type of organization. Four typologies of organization identified by Mintzberg include: Machine bureaucracy, professional bureaucracy, divisionalized form, and the adhocracy. He holds that the "Professional Bureaucracy is common in universities, general hospitals, school systems, public accounting firms, social work agencies, and craft production firms."[1] In defining this type of organization, he noted that such organizations all "rely on the skills and knowledge of their operating professionals to

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[1]Ibid., pp. 348, 349.

function, [and] all produce standard products or services."[1]

Figure 3 shows how Mintzberg's basic model changes to depict the professional bureaucracy. Using his same model, Figure 3 now shows "a flat structure with a thin middle line, a tiny technostructure, and a fully elaborated support staff."[2]

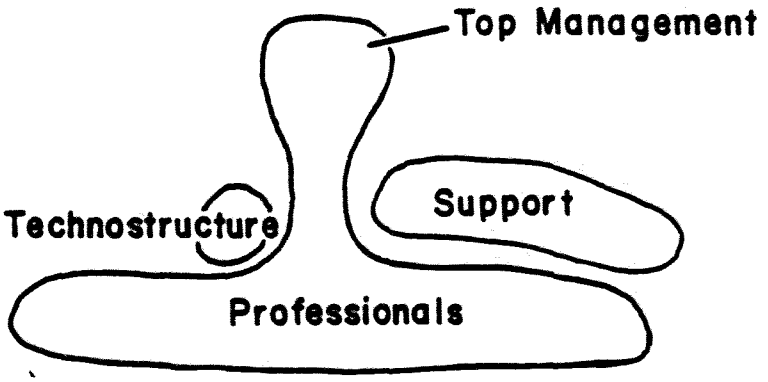

Figure 3. Figure showing Mintzberg's conceptual model depicting a professional bureaucracy.

Hall found problems with typologies of organizations. He does not believe that there is "a generally accepted typology of organizations"[3] even though a set of typologies is desperately needed. He further identified that an "adequate overall classification would have to take into account the array of external conditions, the total spectrum of actions and interactions within an organization, and the

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[1]Ibid., p. 349.

[2]Ibid., p. 355.

[3]Hall, p. 41.

outcome of organizational behaviors."[1]

Galbraith and Nathanson believed, however, that an organization has a variety of structural forms and organizational processes from which to choose. In fact they contended "that organizational members should allocate the time and effort necessary to plan their organizational form just as time and effort are allocated for the formulation of other plans."[2] This thought and the models which indicate a typology of organizational structures is supportive of the thrust and purpose of this research.

Figure 4 depicts Galbraith and Nathanson's model. This model shows the major organizational design variables. Galbraith and Nathanson identified "structure as the segmentation of work into roles such as production, finance, marketing and so on."[3] Processes were viewed as "the direction and frequency of work and information flows linking the differentiated roles within and between departments of the complex organizations."[4]

Thompson wrote that "the major components of a complex organization are determined by the design of that

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[1]Ibid., p. 41.

[2]Jay R. Galbraith and Daniel A. Nathanson, Strategy Implementation: The Role of Structure and Process (St. Paul, Minn.: West Publishing Co., 1978), p. 1.

[3]Ibid., p. 5.

[4]Ibid.

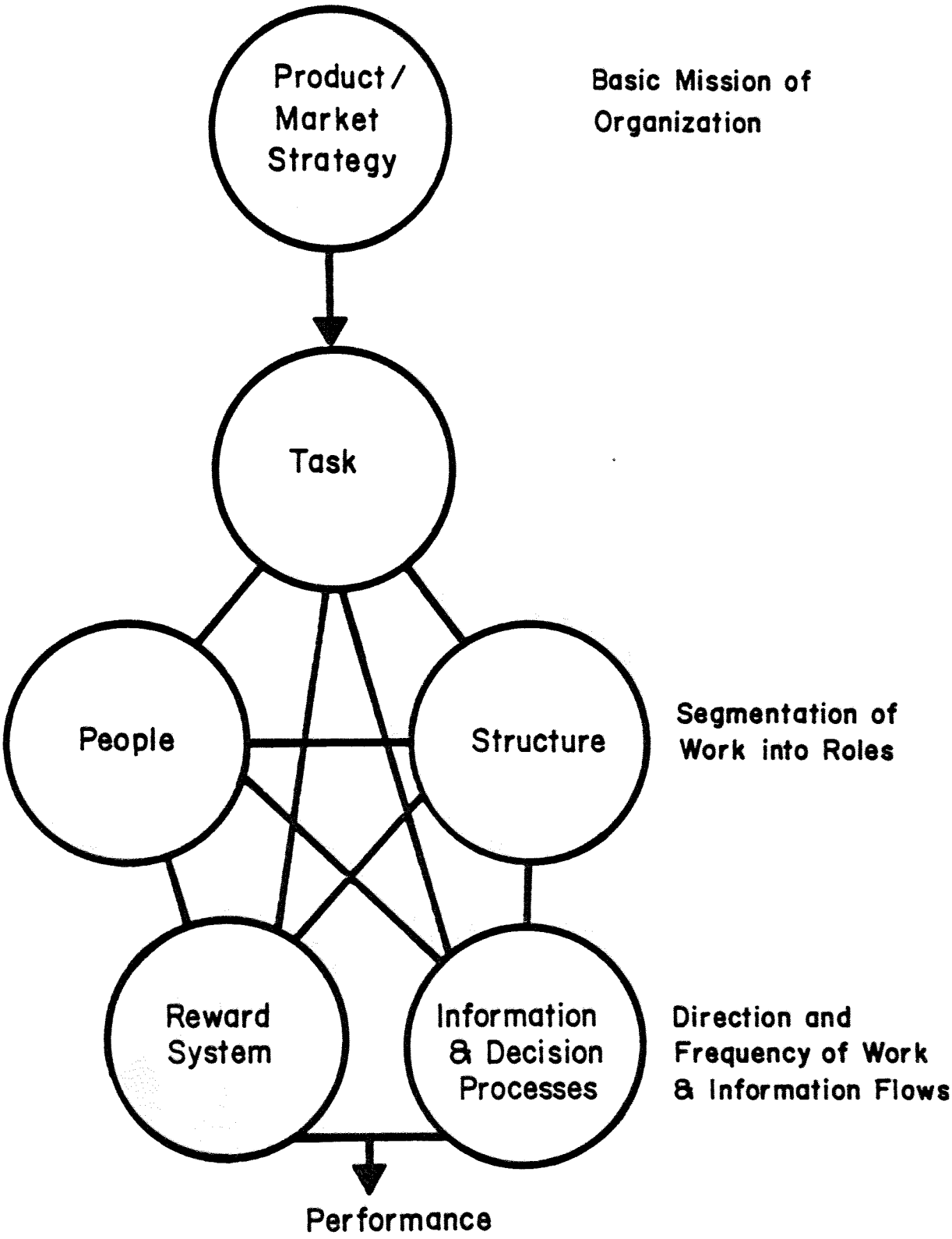

Figure 4. Figure showing Galbraith and Nathanson's major organizational design variables.

organization."[1] It is difficult to find agreement among various researchers (Price, Galbraith, Mintzberg, Thompson) on what are the components of an organization. There seems to be agreement that there are components and in some instances these components have been given labels.

Burns spoke to this problem when he wrote

> organizations are social inventions and not organisms or real objects, yet, it might be agreed, they seem credited by everybody, social scientists included, with a fair number of the attributes of reality and independent existence.[2]

He goes on to say that there are many different types of organizations, from prisons to hospitals, which are very real to people who work there and have to deal with them every day. Burns concluded by stating:

> It should be feasible to list a number of attributes of organizations which vary quantitatively or qualitatively between different organizations and which would, when ordered, correlated, and contrasted, yield a simple classification of organizations that might contribute to an understanding of them.[3]

There has not been identified a clear set of variables, mutually exclusive and exhaustive, which describe the unit of analysis, the organization. As

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[1]James D. Thompson, ed., Organizations in Action (New York: McGraw-Hill Book Company, 1967), p. 51.

[2]Tom Burns, Methods of Organizational Research, ed. Victor H. Vroom (Pittsburgh: University of Pittsburgh Press, 1964), p. 123.

[3]Ibid.

cited earlier Price rightly identified that for organizational research to have value there should be replication of previous studies to add to the validity of those researched variables. The variables identified by Price and selected for this study are the following: administrative staff, autonomy, centralization, communication coordination, dispersion, effectiveness, formalization, mechanization, motivation, basis of power, routinization, satisfaction, size and span of control. Comparisons from various literature sources were done to see if there was any agreement among authors as to meaning of these variables.

Variables Which Describe an Organization

Administrative Staff

According to Price administrative staff refers "to the full-time career members of a social system who primarily perform the activities that indirectly contribute to its primary output."[1] Mintzberg showed on his logo the placement of support staff which in his definition includes Price's administrative staff. Mintzberg noted that "support staff goes largely unrecognized in the literature of organizational structuring."[2]

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[1]Price, Handbook of Organizational Measurement, p. 18.

[2]Mintzberg, p. 19.

Autonomy

Autonomy refers to the amount of independent power the organization has. Price stated that autonomy is "the degree to which a social system has power with respect to its environment."[1] Price recognized the need to distinguish autonomy from centralization. He saw "the distribution of power between a social system and its environment as the referent for autonomy while the referent for centralization is the distribution of power within the social system."[2] Figure 5 shows this differentiation Price is making. Price further differentiates between power and autonomy as he believed that these can vary independently:

> An organization that exercises little power over its internal affairs vis-a-vis its environment will be unable to distribute much power among its membership. However, an organization may exercise immense power over its internal affairs vis-a-vis its environment but decide to distribute little of this power among its membership.[3]

Mintzberg recognized that various power factors which he sees related to autonomy enter into designing the structure of an organization. He proposed three hypotheses which described these power factors:

> The greater the external control of the organization, the more centralized and formalized its structure.[4]

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[1]Price, Handbook of Organizational Measurement, p. 36.

[2]Ibid.

[3]Ibid., p. 37.

[4]Mintzberg, p. 288.

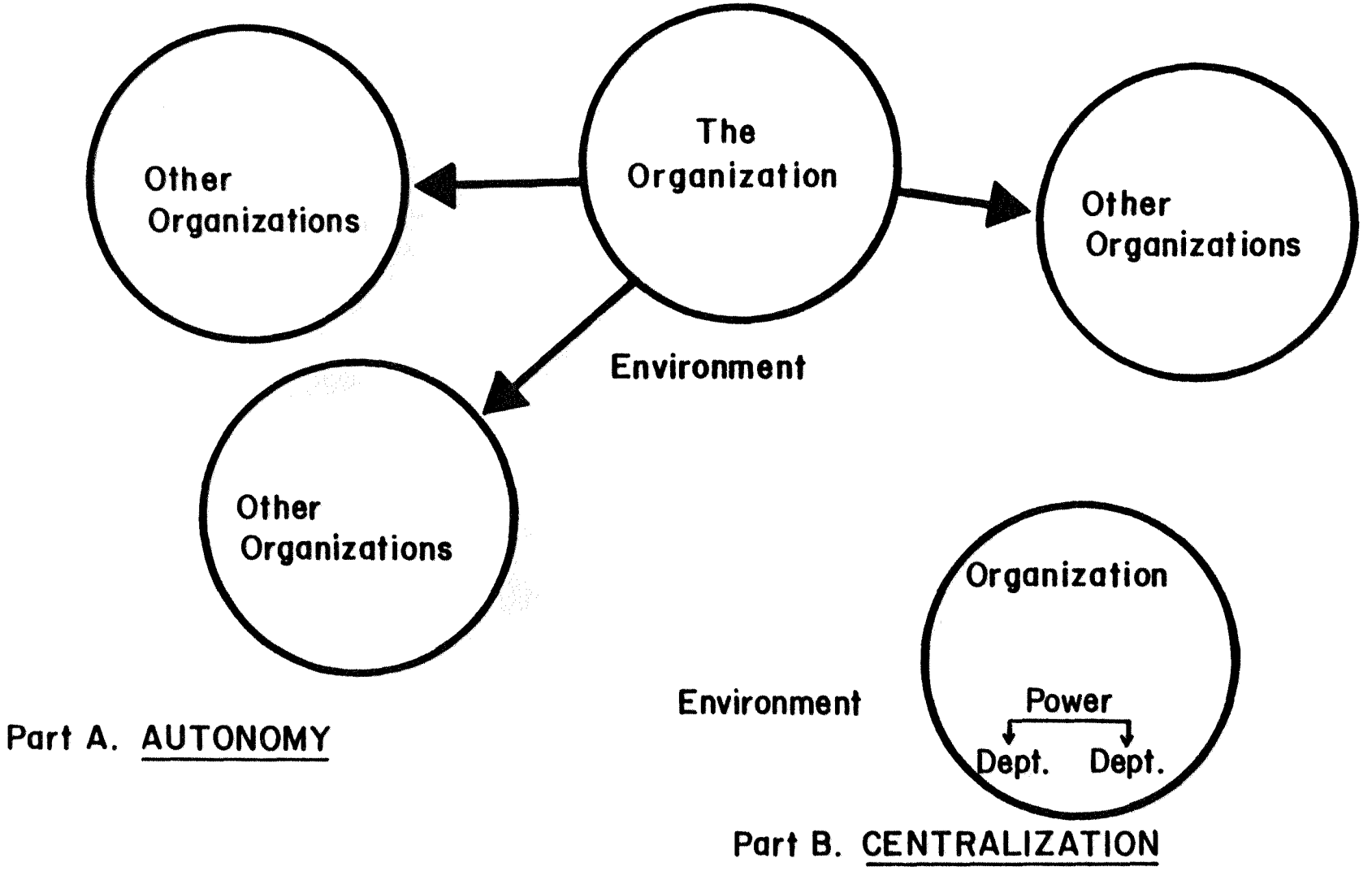

Figure 5. Illustration A depicts autonomy while illustration B shows centralization as expressed by Price.

> The power needs of the members tend to generate structures that are excessively centralized.[1]
>
> Fashion favors the structure of the day (and of the culture), sometimes even when inappropriate.[2]

Centralization

Centralization according to Price is the "degree to which power is concentrated in a social system."[3] If all power were in one person in an organization, this would be the ultimate degree of centralization. On the other hand, if all members of an organization had equal power, then this would be the lowest degree of centralization (Figure 5B).

Mintzberg believed the terms centralization and decentralization as he prefers to call centralization, is probably the "most confused topic in organization theory."[4] However, he holds that:

> When all power for decision making rests at a single point in the organization-ultimately in the hands of a single individual-we shall call the structure centralized; to the extent that power is dispersed among many individuals, we shall call the structure decentralized.[5]

Hall stated that it is important to consider how

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[1]Ibid., p. 291. [2]Ibid., p. 292.

[3]Price, Handbook of Organizational Measurement, p. 43.

[4]Mintzberg, p. 181.

[5]Ibid.

power is distributed in the organization. He wrote about centralization of power and described the way centralization was present in "organizations in which the decisions were made by only a few people at the top (and that they) relied on rules and close supervision as a means of ensuring consistent performance by the workers."[1]

Communication

Communication according to Price is the "degree to which information is transmitted among the members of the social system."[2] Price goes on to identify various types of communication which include, as basic divisions, formal and informal methods. There are other subcategories which describe communication: vertical, horizontal, personal, impersonal, instrumental and expressive.

Hall saw communication as vital to any form of social life. He wrote that "the nature of information and ideas, the means of transmission, the direction of the transmission, the intent of the sender, and the perception of the recipient--all are part of the communication process."[3] Hall held that communication is most important where "organizational segments must deal with uncertainty...and have a

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[1]Hall, p. 177.

[2]Price, Handbook of Organizational Measurement, p. 58.

[3]Hall, p. 269.

technology that does not permit easy routinization."[1]

Tushman found that an important need of the organization is to gather information from and transmit information to several external areas. Special boundary roles evolve in the organization's communication network to fulfill the essential function of linking the organization's internal network to external sources of information.[2] Tushman's studies found that, as systems theory suggests, as organizations grow, they differentiate. Special functional areas perform distinct tasks and each generates "its own idiosyncratic norms, values, time frame and coding schemes to permit effective processing of information."[3] Tushman explains that as a result of functional specialization, organizations have trouble communicating and subunits within the same organization tend to have contrasting languages. Thus, communication is difficult and coordination of one subunit with another subunit is lessened.

Coordination

Price defines coordination as "the degree to which each of the various interdependent part of a social system

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[1]Ibid., p. 271.

[2]Michael L. Tushman, "Special Boundary Roles in the Innovation Process," Administrative Science Quarterly, XXII (December, 1977), 587.

[3]Ibid., p. 590.

operates according to the requirements of the other parts and of the total system."[1] He also wrote that he found little research had been done to measure coordination despite the emphasis placed on it in the literature.

Mintzberg saw the important role of coordination "as much concerned with control and communication as with coordination."[2] Thompson stated that where interdependence exists, "concerted action comes about through coordination and if there are different types of interdependence, we would expect different devices for achieving coordination."[3]

Galbraith and Nathanson identified specific mechanisms used to achieve what they called "interdepartmental coordination."[4] They saw these mechanisms varying from what occurs at top management to departmental level. They developed a prioritized list which represents "a commitment to a more complicated and more expensive mechanism of coordination."[5] Their prioritized list is as follows:

-Hierarchy
-Rules

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[1]Price, Handbook of Organizational Measurement, p. 84.

[2]Mintzberg, p. 3.

[3]Thompson, Organizations in Action, p. 56.

[4]Galbraith and Nathanson, p. 65.

[5]Ibid., p. 66.

-Goal Setting (Planning)
-Direct Contact
-Interdepartmental Liaison Roles
-Temporary Task Forces
-Permanent Teams
-Integrating Roles
-Integrating Department.[1]

Galbraith and Nathanson hold that the "organization should select from the list starting at the top and going down only as far as is necessary to implement its strategy."[2]

Dispersion

Dispersion according to Price is the degree to which the membership of a social system is spatially distributed.[3] He noted that organizational literature sometimes uses ecology for dispersion. Neither Galbraith, Mintzberg, Hall nor Thompson identified this variable by any of the names by which Price identified dispersion.

Price saw this variable as an important describer of organization. Dispersion should be distinguished from "centralization and complexity."[4] He wrote that "distribution of power (centralization) within an organization can vary independently of the distribution of the membership."[5] This is different from complexity,which he defined as the

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[1]Ibid. [2]Ibid.

[3]Price, Handbook of Organizational Measurement, p. 90.

[4]Ibid. [5]Ibid.

"degree of structural differentiation."[1]

Effectiveness

"Effectiveness is the degree to which a social system achieves its goals,"[2] according to Price. He also uses performance and organizational success as synonyms for effectiveness. Mintzberg reported studies done by Woodward who "introduced the notion of contingency theory, that organizational effectiveness results from a match between situation and structure."[3]

Hall wrote that "effectiveness (is) measured by the number of units produced per year and the rate of increase in number of units produced per year."[4] Hall also saw the importance of considering efficiency with effectiveness as one could be efficient and not effective.

Formalization

"Formalization is the degree to which the norms of a social system are explicit," according to Price.[5] These

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[1]Ibid., p. 91.

[2]Ibid., p. 101.

[3]J. Woodward, Industrial Organizations: Theory and Practice (Fair Lawn, N.J.: Oxford Press, 1965), cited by Mintzberg, p. 217.

[4]Hall, p. 16.

[5]Price, Handbook of Organizational Measurement, p. 107.

norms may or may not be written.

Price found other terms which are used under the concept of formalization. These included:

> rules, procedures, degree of structure, degree of task structure, segmental participation, programming, ambiguity, program specification, and primary-secondary relationships.[1]

Mintzberg saw that "formalization of behavior is the design parameter by which the work processes of the organization are standardized."[2] He further noted that behavior can be formalized in three ways: "formalized by job; formalized by work flow; formalized by rules."[3] Mintzberg concludes that no matter what means of formalization are used, the effect on the person is the same, i.e., behavior is regulated.

Hall agrees with Price and Mintzberg noting that "rules and procedures designed to handle contingencies faced by the organization are part of what is called formalization."[4]

Mechanization

Price defined mechanization as the "degree to which

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[1] Ibid.

[2] Mintzberg, p. 81.

[3] Ibid., pp. 82, 83.

[4] Hall, p. 173.

a social system uses inanimate sources of energy."[1] He stated that other authors use "automation," "industrialization," and "technology" for mechanization.

Mintzberg hypothesized that "the more regulating the technical system, the more formalized the operating work and the more bureaucratic the structure of the operating core."[2] In other words, the mechanization utilized by an organization affects the formalization and structure of the organization. Hall found those "organizations concerned with objects were more bureaucratic than those concerned with ideas."[3] He further agreed that an organization's technology does have an impact on the way it is structured.

Motivation

Motivation according to Price "is the degree to which members of a social system are willing to work."[4] Price suggested that other terms used in the literature which have the same meaning are: "dedication, commitment, effort,

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[1]Price, Handbook of Organizational Measurement, p. 129.

[2]Mintzberg, p. 261.

[3]Hall, p. 70.

[4]Price, Handbook of Organizational Measurement, p. 137.

involvement, central-life interests, organizational climate."[1] Price differentiates motivation from satisfaction, which will be discussed later.

Mintzberg saw the professional bureaucracy as

> democratic, disseminating its power directly to its workers...(it) provides them with extensive autonomy, freeing them even the need to coordinate closely with their peers...constrained only by the established standards of his profession... and the result (being that) professionals tend to emerge as responsible and highly motivated individuals, dedicated to their work and clients they serve.[2]

Motivation is a subjective concept which may be measured by objective data like absenteeism, turnover, and productivity.

Bases of Power

Bases of power, as used by Price, "are sources of an individual's capacity to obtain performance from other individuals."[3] Distribution of power is described under the variables of autonomy and centralization which were discussed earlier.

Mintzberg discussed at length the distribution of power and power factors which include: "presence of outside control of the organization, the personal needs of its

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[1] Ibid.

[2] Mintzberg, p. 371.

[3] Price, Handbook of Organizational Measurement, p. 145.

various members, and the fashion of the day (in effect, the power of social norms)."[1] Mintzberg, however, did not speak directly to power as Price has identified it.

Thompson saw power not as an attribute to the organization but "as resulting from a set of relationships between the organization and the several elements of its pluralistic task environment."[2] Hall used French and Raven's typology of power: "bases of power, a typology based on the nature of the relationship between the power holder and the power recipient....These are: reward power...coercive power...legitimate power...referent power...expert power."[3] This typology agrees with Price's definition.

Routinization

"The degree to which role performance is repetitive" is seen as routinization by Price.[4] Other terms which Price has identified that are found in the literature and mean the same include: technology, standardization, technological complexity, programmed decision-making and professionalism.

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[1]Mintzberg, p. 288.

[2]Thompson, Organizations in Action, p. 31.

[3]Dorwin Cartwright and Alvin Zander, "The Bases of Social Power," Group Dynamics (3d ed.; New York: Harper & Row, 1968), p. 259, cited by Hall, p. 208.

[4]Price, Handbook of Organizational Measurement, p. 150.

Mintzberg wrote that there are five coordinating mechanisms in which organizations seem to coordinate their work. Of those, three are standardized: "standardization of work processes; standardization of work outputs; standardization of worker skills."[1]

Mintzberg further clarified these by writing that "work processes are standardized when the contents of the work are specified, or programmed."[2] Standardized work outputs also would add to routinization as the dimensions of the product or performance are specified. Standardization of worker skills refers more to the preparation of the worker being hired and so would not fit Price's definition even though it is labelled "standardization."

Satisfaction

Price wrote "satisfaction is the degree to which members of a social system have a positive affective orientation toward membership in the system."[3] He also saw other terms in the literature having similar meaning. These terms include: "morale, identification, job attitudes, lack of boredom, cohesion, solidarity, loyalty, integration and

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[1]Mintzberg, p. 3.

[2]Ibid., p. 5.

[3]Price, Handbook of Organizational Measurement, p. 156.

organizational climate."[1]

Size

Size according to Price "is the scale of operations of a social system."[2] He states that size in organizational literature usually refers to the number of personnel in an organization. Price points out though that this understanding of size can be misleading as "an organization can be quite large in size, but due to a very high degree of mechanization, for example, have relatively few personnel."[3] Therefore, size must be examined in terms of the scale of the operation of an organization as well as the number of employees.

Hall saw organization size as being a multifaceted variable. He wrote "that large size is related to increased complexity in terms of specialization and horizontal and vertical differentiation."[4] He further detailed that "the size factor is greatly modified by technology or technology employed by the organization."[5]

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[1] Ibid.

[2] Ibid., p. 174.

[3] Ibid.

[4] Hall, p. 138.

[5] Ibid.

Mintzberg agreed with Hall as he saw "the larger the organization, the more elaborate its structure, that is, the more specialized its tasks, the more differentiated its units, and the more developed its administrative component."[1]

Dewar and Hage's findings did not agree with the above authors for they found that the most important determinate of differentiation in the division of labor is the scope of an organization's task, a technological dimension that was not dependent on the organizational size.[2]

Mileti, Gillespie and Haas looked at organizational size and spatial, vertical and horizontal complexity. They duplicated and expanded studies done by Blau and Schoenherr. Mileti and associates wrote "that size is positively related to both vertical and horizontal differentiation in a curvilineu fashion, that is, the relative size on vertical differentiation is stronger than that of size on horizontal differentiation."[3]

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[1]Mintzberg, p. 230.

[2]Robert Dewar and Jerald Hage, "Size, Technology, Complexity and Structural Differentiation: Toward a Theoretical Synthesis," Administrative Science Quarterly, March, 1978, p. 111.

[3]Dennis S. Mileti, David F. Gillespie, and J. Eugene Haas, "Size and Structure in Complex Organizations," Social Forces, LVI (September, 1977), 212.

Span of Control

Price's use of span of control refers to "the number of members managed by the average administrator."[1] Usually terms like superordinates and subordinates, according to Price, are used to describe span of control.

Mintzberg wrote of various factors which influence the span of control:

> the unit size is driven up by:
> 1. standardization of all three types of organization...
> 2. similarity in the tasks performed in a given unit...
> 3. employees need for autonomy and self-actualization...
> 4. need to reduce distortion in the flow of information...up to the hierarchy....[2]
>
> the unit size is driven down by:
> 1. need for close direct supervision...
> 2. need for mutual adjustment among complex interdependent tasks...
> 3. extent to which the manager of a unit has non-supervisory duties to perform...
> 4. need for members of unit to have frequent access to manager for consultation or advice....[3]

Measuring Effectiveness of Organizations

Evaluating the effectiveness of programming of organizations is done by investigating the "consequences of these dynamic programs that attempt to alter key variables

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[1]Price, Handbook of Organizational Measurement, p. 180.

[2]Mintzberg, p. 143.

[3]Ibid.

in people's lives."[1] Weiss' model for evaluation has several variables and is shown in Figure 6.[2]

Weiss saw the need to define and quantify the input variables which include: purpose, methods, staffing. Weiss also saw the program participants' characteristics as input data, and she considered such information important when doing program evaluation. Intervening variables, according to Weiss, include the actual program and how it operates, frequency of exposure, acceptance of program by peers and extent of coordination of services. Bridging variables according to Weiss are "presumed to link the events of program to the desired effects."[3] For example, a nursing continuation program should indeed improve nursing practice and health care delivery.

Hall commented that it "is the assumption that the organization operates in a relatively free market and the customer or client is free to select an alternative organization if his needs are not being met."[4] He saw that this free selectivity of the client as a key to an indication of the effective organization where the client is not a captive audience of a particular organization.

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[1]Carol H. Weiss, Evaluation Research (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1972), p. viii.

[2]Ibid., pp. 46, 47. [3]Ibid., p. 49.

[4]Hall, p. 101.

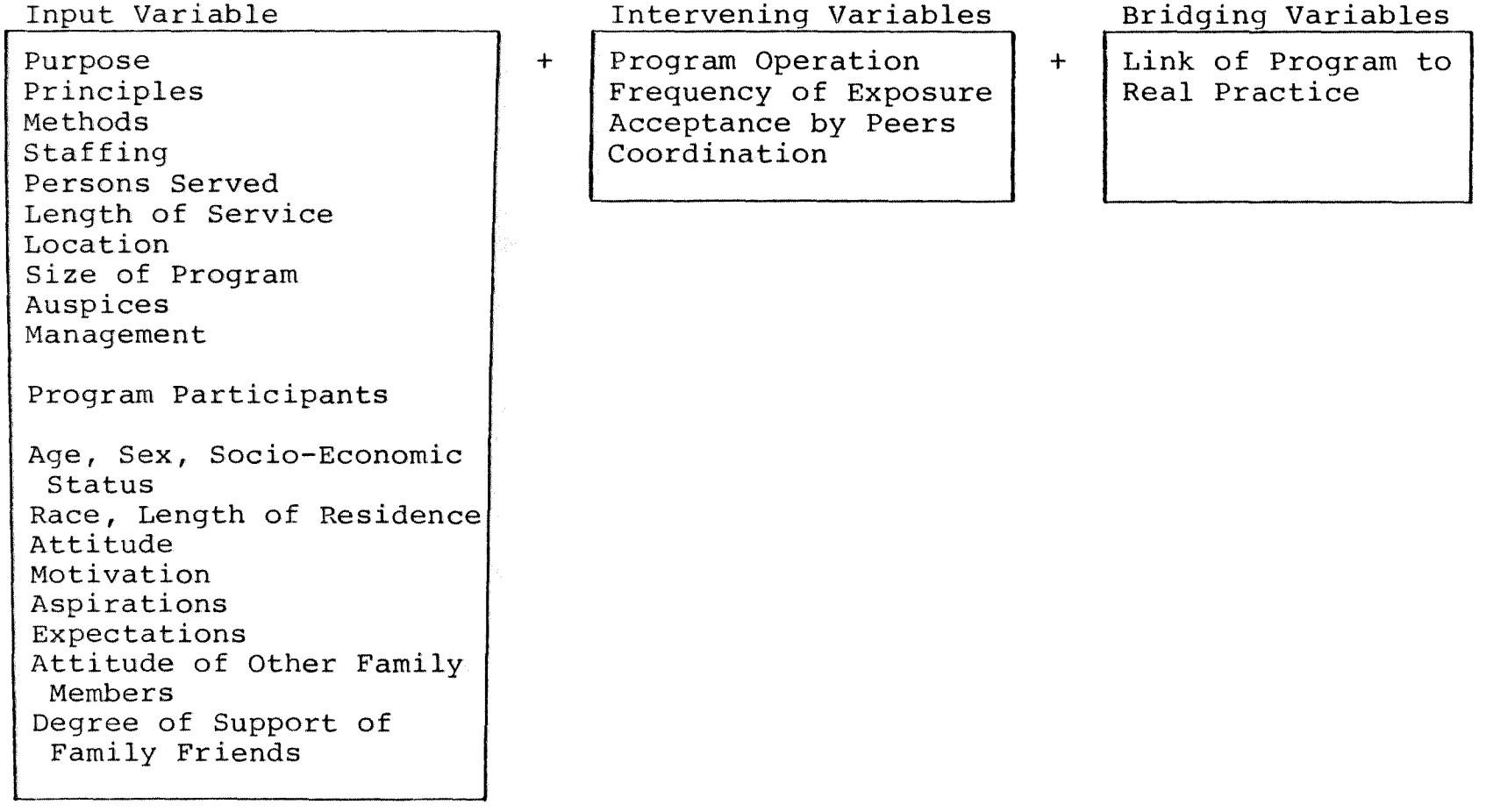

Figure 6. Figure showing Weiss' input, intervening and bridging variables which should be considered when evaluating program effectiveness.

Houle saw that evaluation of educational programs can be undertaken "within three possible frames of reference":

1. Measurement of the results of the formal educational activity (following the continuing education program).

2. Assessment of the extent and quality of the developed ability of individual practitioners as a result of both the formal study and the educational consequences of the worklife.

3. Estimate of the level of performance of an entire profession or some significant sector of it.[1]

To ensure that a continuing education program is valuable, and that the organization providing that program is then effective, is difficult to measure. Houle judged some continuing education programs as being as "valuable as shouting out of the window."[2] Houle proceeded to clarify this statement when he wrote:

> Faculty members who can be persuaded to do so give lectures on subjects of their own choosing to audiences they do not know, who have assembled only because they want to put in enough hours of classroom attendance so that they can meet relicensure requirement.[3]

Evaluation theories by Stuffelbeam and Stack as discussed by Deming and Phillips[4] are utilized in formal

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[1]Houle, Continued Learning in the Professions, p. 266.

[2]Ibid.

[3]Ibid.

[4]Basil S. Deming and James A. Phillips, Jr., "Systematic Curriculum Evaluation: A Means and Methodology," Theory into Practice, XIII (1977), 41-45.

educational settings and these same principles would apply to continuing education. They note that there is a need to know the goals of the program, the expectations of the learners and to see if there is, indeed, a match among these goals. Finally, there needs to be a measure to see if goals were achieved for not only the continuing education program but also for the learner.

Types of Organization that Offer Nursing Continuing Education

In Iowa, since mandatory continuing education is required for renewal of licensure, many providers of nursing continuing education have appeared. Prior to April, 1979, hospitals, universities, community colleges, and professional associations were the major providers. Among the new types of providers are national firms which call themselves "consultants," and groups of professionals who have formed corporations which offer nursing continuing education. Houle, at a theoretical level, identified seven dominant forms of providers: "autonomous groups, professional associations, professional schools, the non-professional school sector of universities, places of employment, independent providers of learning opportunities, and purveyors of professional supplies and equipment."[1] All of these organization types are found in Iowa.

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[1]Houle, Continued Learning in the Professions, p. 166.

Summary

The literature review has brought to the reader a brief historical overview of the field of continuing education. Further, more specific problems of nursing continuing education were identified. A concern for quality nursing continuing education was isolated and the nature and importance of the organization providing continuing education was stressed.

Therefore, since the nature of the organization is critical, there is a need to look at organizations. Multiple variables used in the literature to describe organizations were explored. Price, Mintzberg, Hall, Thompson were principle sources, as there are relatively few authors presenting a global view of organizations.

Finally, effectiveness of organizations providing continuing education has been linked with client satisfaction and thus provides an insight into evaluating such organizations which provide continuing education. There are various types of organizations which offer continuing education. Effectiveness, at this point does not seem tied to type of organization but rather to client satisfaction. This research effort will explore the linkages between organization structure and effectiveness, an area of concern ignored to date by theorists and continuing education practitioners.

Chapter 3

RESEARCH DESIGN AND METHODOLOGY

The research design and methodology are presented in this Chapter. First, a description of Phase I of the study is given. The instrument, population and sampling technique used to collect the data in Phase I are discussed. Then in Phase II a description is given which details the population, sampling technique and tool used to collect the data. Finally, the organization and the statistical analysis of the data are reported.

Phase I

The survey research was done in two phases. The first phase was conducted by using a questionnaire (see Appendix A) which was sent to a randomly selected sample of currently registered nurses in the State of Iowa.

Description of Questionnaire

The seventeen-item questionnaire was developed by the researcher for this study. The tool was pre-tested on a group of thirty-five registered nurses attending a nursing continuing education workshop. The tool (see Appendix A) was then refined and subsequently submitted to four

researchers for their critique. The questionnaire asked the respondent to identify the organization which offered, in his/her opinion, the most valuable nursing continuing education program during the year: April 1, 1979 to March 31, 1980. Information obtained on each questionnaire from respondents included the following:

Information concerning the respondent:

rural-urban
basic nursing preparation
highest level of additional education
present position in nursing
type of nursing setting employed in
employment status (full, part-time)
number of years in present job
number of years in nursing
attitude toward mandatory nursing continuing education.

Information concerning the type of program deemed valuable:

title of program
brief description of program
reason program was deemed valuable
cost of program
if program was paid by employer
number of CEU's of program
length of program

Information concerning the identified organization providing the identified program:

name of organization
address of organization

In order to identify effective organizations, it was deemed necessary to ask the respondents which nursing continuing education program they believed most valuable.

Weiss[1] and Hall[2] saw client satisfaction as being a reasonable indicator, or surrogate measurer, of the effectiveness of an organization in delivering services. To determine if the respondent's identification of a particular organization was influenced by any factor other than the quality of the program, information on variables which described the respondent (listed above) was gathered to use as control variables. Further, to help identify the reason the program was deemed valuable, seven different variables describing the program were elicited. Finally, the organization's name and address were requested.

Description of the Population and Sampling Technique

There are 22,681 currently (1979-80) registered nurses in the state of Iowa. The researcher purchased the computer printed labels of all currently registered nurses from the Iowa Board of Nursing. The labels were printed by county starting with county number one and going through county ninety-nine. Appendix F lists the county number, name, and the total number of currently registered nurses in the state in each county. The researcher randomly selected 5 percent of the nurses from each county; the total sample that was selected was 1,134 registered nurses. Each randomly selected element was assigned two code numbers. The

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[1]Weiss, Evaluation Research, p. viii.

[2]Hall, Organizations Structures and Process, p. 41.

first number was the county number and the second number identified the elements in the order of selection. For example, code number 1-13 would be a nurse from county number one and the thirteenth nurse randomly selected. A master sample book was prepared, listing by name, address, and code number all nurses selected from each county. This master list was needed in order to be able to check the accuracy of the coding of the questionnaire and address of each nurse on the letter and to ensure that all selected participants had received a questionnaire.

A group of fifteen volunteers from Bethany Lutheran Church and Grand View College assisted the researcher in preparing the questionnaire for mailing on June 7, 1980. Included with the questionnaire was a cover letter (see Appendix C) explaining the purpose of the study, the confidential nature of the recipient's response and a self-addressed, stamped envelope.

The first returns were monitored on a specially designed form, found in Appendix E. The table in Appendix G shows the daily rate of return. By June 27, 1980 (three weeks after the initial questionnaire was sent), 49 percent of the questionnaires had been returned. On June 28, 1980, another questionnaire, a stamped, self-addressed envelope and a second cover letter (see Appendix D) were mailed to all non-respondents.

The response to this second mailing brought the total

number of responses received by the cut-off date (July 15, 1980) to 813, or 72 percent of the sample. This cut-off date was selected by the researcher.

Phase II

Description of the Organization Population and Sample

Only organizations which were approved providers were a part of this study. All organizations identified by the respondents in Phase I of this study were validated as an approved provider if they had a provider number as issued by the Iowa Board of Nursing. If the identified organization was an out-of-state organization and/or had no Iowa provider number, it was so identified and was not considered as a part of this study. Further, each organization was identified by type. All Iowa approved provider organizations identified were classified according to the following taxonomy and assigned an additional code number which would represent that category:

Organization Types	Code Number
Hospital	1
Community College	2
Clinic	3
Vocational-technical College	4
University-Public	5
Private College	6
Consultant Group	7
Professional Association	8
Continuing Education Association	9
State Department of Social Services	10
Long-term Care Facility	11
Other	12
School of Nursing (diploma)	14

The following definitions of the terms used in the taxonomy were adopted for the purposes of this study:

Hospital, Community College, Vocational-technical College, University, were so identified by that particular term if that term is a part of its official name.

Clinic - One organization was identified by its official name.

Private College - Organizations identified by Department of Public Instruction as a private college.

School of Nursing - Organizations identified by the Iowa Board of Nursing.

Professional Organizations - Organizations that are listed nationally as professional organizations. In Iowa this includes: American Association Operating Nurses, School Nurses Association, Orthopedic Nurses Association, Iowa Nurses Association, Iowa Hospital Association.

Consultant Group - An organization formed by nurse consultants and/or a corporation hiring nurse consultants and having the name as part of its official title.

Long-Term Care - An organization whose primary purpose is to give long-term care but also provide continuing education.

State Department of Social Services - An organization of the State Department of Social Services.

Other - All those organizations with out-of-state addresses and those organizations identified with an Iowa

address but having no Iowa Board provider number.

The identified organizations were stratified according to type of organization. Further, the organizations within each type were listed from the most often identified to the least often identified. Then the researcher randomly selected a sub-sample from each type of organization. This was done to neutralize the impact of organization size (where size was determined by the number of programs offered) to eliminate alternative explanatory hypotheses, i.e., a program which appears uniquely successful because it provides significantly more programs per year.

The total number of approved providers in the state of Iowa was 115 (as of June 26, 1980). The 813 respondents identified seventy-one different organizations in eleven of the categories identified above. Table 1 shows the total number of organizations in the state for each category, the number identified and the number selected for Phase II of this study. A total of twenty-nine organizations was selected.

Time and resource constraints determined the sample size for Phase II of this research project. In order to include a provider representing each type of organization, it was sometimes necessary to include the only element identified in that type (category 3 and 11 only) and a random selection was not possible in those instances. A table of random numbers was used and the organizations of each type

Table 1

Table Showing the Number for each Type of Organization Offering Nursing Continuing Education in Iowa and the Number Identified by Respondents and the Number Selected for Phase II of this Study

Code	Type of Organization	Total in State	Number Identified	Number of Sample	% Selected
1	Hospital	35	30	10	33
2	Community College	11	11	5	45
3	Clinic	1	1	1	100
4	Voc. Tech. College	4	4	2	50
5	University	6	5	2	40
6	Private College	7	3	1	33
7	Consultant's Group	9	3	1	33
8	Professional Assoc.	14	9	4	44
9	Continuing Ed. Assoc.	3	2	1	50
10	State Dept. Social Serv.	1	0	0	0
11	Long-Term Care Facilities	4	1	1	100
12	Other	18			
14	School of Nurs. (Diploma)	2	2	1	50
Total		115	71	29	
Percent		100%	62%	41%	

were randomly selected and a code number assigned. For example, code number 2-12 indicates the organization to be a community college and the twelfth organization randomly selected.

The geographical distribution of the organizations in the sample is shown on the map of Iowa in Appendix I. The percent urban and percent rural of the county where the selected organizations are appears in Table 2. Each organization is listed by its code number and the population distribution as indicated by the census.

Description of the Instrument

The interview instrument is composed of a series of tools suggested by James Price in his Handbook of Organizational Measurement. These were discussed in Chapter 2. Permission to reproduce the tools for this study was obtained from the publisher (see Appendix L). In order to describe an organization effectively, a variety of measures are needed. Based on the review of literature it is felt that the measures utilized are adequately sophisticated and exhaustive to provide a clear understanding of the nature of the organizations under study.

A conceptualization was developed to help describe an organization in terms appropriate to this writer's professional training and to the environment of the study. The following figure (Figure 7) shows this conceptualization, which is called "Anatomy of an Organization." The critical

Table 2

Table Showing each County Percent Urban and Rural Status

Organization Code #	County of Selected Organization	% Urban*	% Rural*
1-1	Polk	92.8	7.2
1-2	Black Hawk	85.0	15.0
1-3	Webster	64.6	35.4
1-4	Des Moines	75.7	24.3
1-5	Clay	55.7	44.3
1-6	Polk	92.8	7.2
1-7	Story	71.1	28.9
1-8	Cass	43.0	57.0
1-9	Johnson	73.7	26.3
1-10	Poweshiek	45.3	54.7
2-1	Polk	92.8	7.2
2-2	Webster	64.6	35.4
2-3	Linn	82.8	17.2
2-4	Emmet	56.4	43.6
2-5	Union	60.6	39.4
3-1	Story	71.1	28.9
4-1	Woodbury	84.5	15.5
4-2	Winneshiek	34.3	65.7
5-1	Johnson	73.7	26.3
5-2	Story	71.1	28.9
6-1	Linn	82.8	17.2
7-1	Wapello	70.5	29.5
8-1	Polk	92.8	7.2
8-2	Polk	92.8	7.2
8-3	Des Moines	75.7	24.3
8-4	Black Hawk	85.0	15.0

Table 2 (continued)

Organization Code #	County of Selected Organization	% Urban*	% Rural*
9-1	Winneshiek	34.3	65.7
11-1	Polk	92.8	7.2
14-1	Woodbury	84.5	15.5

*These data were obtained from A Report on Iowa County and Area Agency Elderly and Total Population. Prepared by Evaluative Research Consultants, Inc., 1809-44th Street, Des Moines, Iowa. (This report was commissioned by Iowa Commission on the Aging, Leona I. Peterson, Director.) 9/76

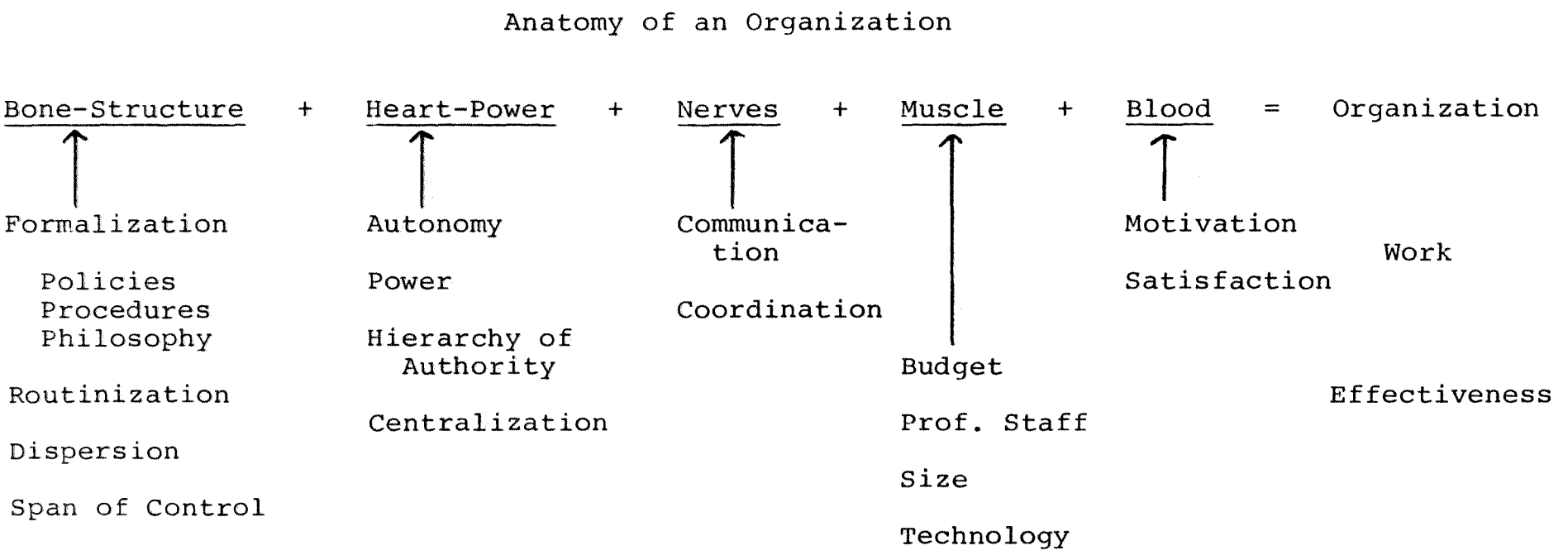

Figure 7. Figure showing Theile's conceptualization of the anatomy of an organization and the variables used in this study to describe the various anatomical parts.

elements of the anatomy of the organization, as shown in the figure, are: bone-structure, heart-power, nerves, muscle and blood. The work of the organization or its function could be likened to the physiology of the organization.

Price's variables used to describe each of the critical elements and as shown in Figure 7 are:

Critical Element	Price's Variables
Bone (Structure)	Formalization - Variable 1 Routinization - 2 Dispersion - 3 Span of Control - 4
Heart (Power)	Autonomy - 5 Hierarchy of Authority - 5 Bases of Power - 6 Centralization - 7
Nerves	Communication - 8 Coordination - 9
Muscles	Size Professional Staff, Secretarial Staff - 10 Budget - 11 Technology (Mechanization) - 12
Blood	Motivation - 13 Satisfaction - 14
Work	Effectiveness - 15

The variables listed above are operationalized by means of questions in the interview schedule for the administrators of the identified organizations. Detailed analysis of codes, content and values are found in Appendix J of this study. However, it is of value to present the operational definitions in summary form at this point.

Variable 1. Formalization - the degree to which the

norms of a social system are explicit.[1] This variable was scored by summing the responses of questions 1-15 on pages 1 and 2 using designated response category on 18, 19 and then taking an average. The higher the score on this variable, the greater the degree of formalization.

Formalization was further measured by summing the scores for the responses to statements 1-9 on page 2 and 3 related to the types of written documents within the organization, i.e., contracts, job description, policy, procedure manual and philosophy. The larger the score, the greater the formalization.

Variable 2. Routinization - the degree to which role performance in an organization is repetitive.[2] The response to statements on page 17 was scored and an average obtained. The higher the score the more non-routine was the task.

Variable 3. Dispersion - the degree to which the membership of an organization is spatially distributed.[3] The interviewee was asked what percent of personnel was at one site. The response listed on page 8 was recorded. The statement which was given a one by the respondent was the value that was recorded for this variable.

Variable 4. Span of Control - refers to the number of

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[1]Price, Handbook of Organizational Measurement, p. 107.

[2]Ibid., p. 150. [3]Ibid., p. 90.

members managed by the average administrators. The subordinates were listed by position and counted. The higher the value the larger the span of control.

Variable 5. Autonomy - the degree to which a social system has power with respect to its environment.[1] The statements 1-18 on page 5 were scored with "1" for a yes and "0" for a no response. The higher the score the greater the autonomy within the organization as more decisions were made within the organization.

Variable 6. Power - refers to the degree to which an individual has the capacity to obtain performance from other individuals.[2] A series of five statements were read to the respondent. These statements on page 6 of the interview tool were the five reasons generally given by people when they were asked why they did the things their superiors suggested or wanted them to do.

Further, each statement was precoded to show one of the five bases of social power, namely: referent, expect, reward, legitimate and coercive. As the researcher read the statements the respondents coded each statement with a 1-5 value with 1 being the most important reason that he/she did what his/her superior wanted. The statement which was given a "1" by the respondent was the value that was recorded by this variable.

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[1] Ibid., p. 36. [2] Ibid., p. 145.

Variable 7. Hierarchy of Authority - another measure of autonomy and power within the organization. Statements 1-5 on page 7 of the interview tool were read to the subject. An average score was recorded; the higher the score the greater the autonomy.

Variable 8. Centralization - refers to the degree to which power is concentrated in a social system.[1] The statements 1-4 on page 7 were read and a score recorded based on the response. An average score was computed. The lower the score, the higher the degree of power in the organization.

Variable 9. Communication - the degree to which information is transmitted among the members of the organization.[2] Communication was examined in different aspects which included: Adequacy of Communication, page 9; Amount of Communication, page 9; Qualitative Aspects of Communication, pages 9, 10; Formal Communication, page 10; Informal Communication, page 10; Frequency of Informal Communication, page 10.

Each of these was scored in the following ways:

Adequacy: the lower the score the more adequate the communication.

Amount: the higher the score the greater the amount of communication.

Qualitative: the higher the score the more quality to the communication.

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[1] Ibid., p. 43.

[2] Ibid., p. 58.

Formal: an average was computed in response to 1-7 statements. There are three positive statements and four negative statements. A score of three would be an indication of positive formal communication from the supervisor.

Informal: scored according to:
-amount of time (frequency)
-position of person with whom the person talked informally (scale 1-4)
-amount of time spent in discussing different issues (page 11 of interview tool)(frequency)

Variable 10. Coordination - the degree to which each of the various interdependent parts of an organization operates according to the requirements of the other parts and the total system.[1]

Two scores were obtained for coordination. One score was the average of response to statements 1-4 on page 8. The other score was obtained from the response to question 5 on page 8. Question five was a test of reliability for the other four questions. The lower the score for the first four statements, the higher the degree of coordination. The response to question five should match or be compatible with the mean of the first four statements if the respondent was consistent in his/her responses.

Variable 11. Size - the scale of operation of a social system is indicated by the number of people employed in [nursing continuing education] and the amount of money budgeted.[2] Size was examined as it related to the

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[1]Ibid., p. 84. [2]Ibid., p. 174.

amount budgeted for nursing continuing education (pages 3, 4). The higher the value of the response category, the larger the amount budgeted for continuing education. The no-response category is number seven while the other options are from one to six.

The respondent was given an opportunity to differentiate between personnel with college degrees and/or nurses (page 3) and secretarial level of staff (page 4). Further, the respondents identified how many full-time and how many part-time people were in each category. Each response category had a scale. The higher the scale the larger the size, as it relates to staff and personnel of the organization.

Variable 12. Mechanization - the degree to which an organization uses inanimate sources of energy/mechanization.[1] A list of various aids, i.e., computer, word processor, microfilm are listed on page 13. The interviewer could add any equipment not included on that list. Two points were scored for any mechanical aid identified. The higher the score the higher the degree of mechanization.

Variable 13. Motivation - the degree to which members of an organization are willing to work.[2] Statements 1-20 on page 14 of the interview tool were read and scored by the interviewee. The scores were summed. The higher the score, the lower the motivation.

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[1] Ibid., p. 129. [2] Ibid., p. 137.

Variable 14. Satisfaction - the degree to which members of the organization have a positive affective orientation toward membership in the system.[1] A series of statements 1-12, pages 15 and 16, were read to the subject. Three responses were obtained for each statement. For each statement that was read the interviewee was asked: (a) How much is there now? (b) How much should there be? (c) How important is this to you?

A value from the (a) scale of 1-5 was given with one being none and five a lot. Computation was done by subtracting value (a) from (b) and the questions were grouped for recording values in each of these areas:

Security - Question 6

Social - mean of Questions 10 and 13

Esteem - mean of Questions 1, 4 and 8

Autonomy - mean of Questions 2, 5 and 11

Self-realization - mean of Questions 3, 7 and 9

The lower the score the higher the satisfaction.

A comparison of how important the issue in the statement was to the subject was scored. The higher the value the more important.

Variable 15. Effectiveness - the degree to which an organization achieves its goals...performs and has organizational success.[2]

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[1]Ibid., p. 156. [2]Ibid., p. 101.

Effectiveness, the work of the organization was measured by four attributes:

-number of programs annually
-average number of participants at each workshop
-usual length of workshop
-average cost (fee) of the workshop

Interview Process

The telephone number and name of the director of each selected organization for the sample of Phase II of this study were obtained from the Iowa Board of nursing. Permission was obtained from Drake University to use the Wats line on selected dates and times for the interviews. All interviews were conducted between July 21, 1980, and August 6, 1980. At the outset of the interview, verbal permission was obtained from each director of nursing continuing education except, in one instance, where a written request for permission was required. Permission to interview for that organization was obtained after the cut-off date as set by the researcher. Thus the sample size was twenty-eight.

The researcher followed the same protocol (page 1 of Interview Tool) when beginning the introductory phase of the interview, and all questions and/or statements were read as given. If the subject had a question concerning one of the statements and/or questions, the item was reread. The interview lasted thirty to forty minutes depending upon how much reflection-time the subject needed to respond to an item.

Organization of Work Data

The data collected for each organization were analyzed separately for each variable, and for each construct in the conceptualization.

Further, the organizations were considered individually and according to type as indicated in the taxonomy. Further, it was observed that the nursing continuing education subunit could be a part of a multi-purposed institution, limited-purpose or a single-purposed institution (see Figure 8). The data from the tools were analyzed within these larger groups to see if there were any differences among organizations. Finally, the organizations were grouped into educational and non-educational institutions for a further analysis. Figure 9 shows this differentiation.

Analysis of Data

The data were coded (see Appendix B and K) and keypunched for tabulation and statistical treatment by the Academic Computing Facilities at Drake University. Selected programs from the Statistical Package for the Social Sciences[1] were used for the statistical analysis of the data.

The data were analyzed by frequency and percent for each variable in Phase I and Phase II of the study. In

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[1]Norman H. Nie et al., Statistical Package for the Social Sciences (2d ed.; New York: McGraw-Hill Book Co., 1975).

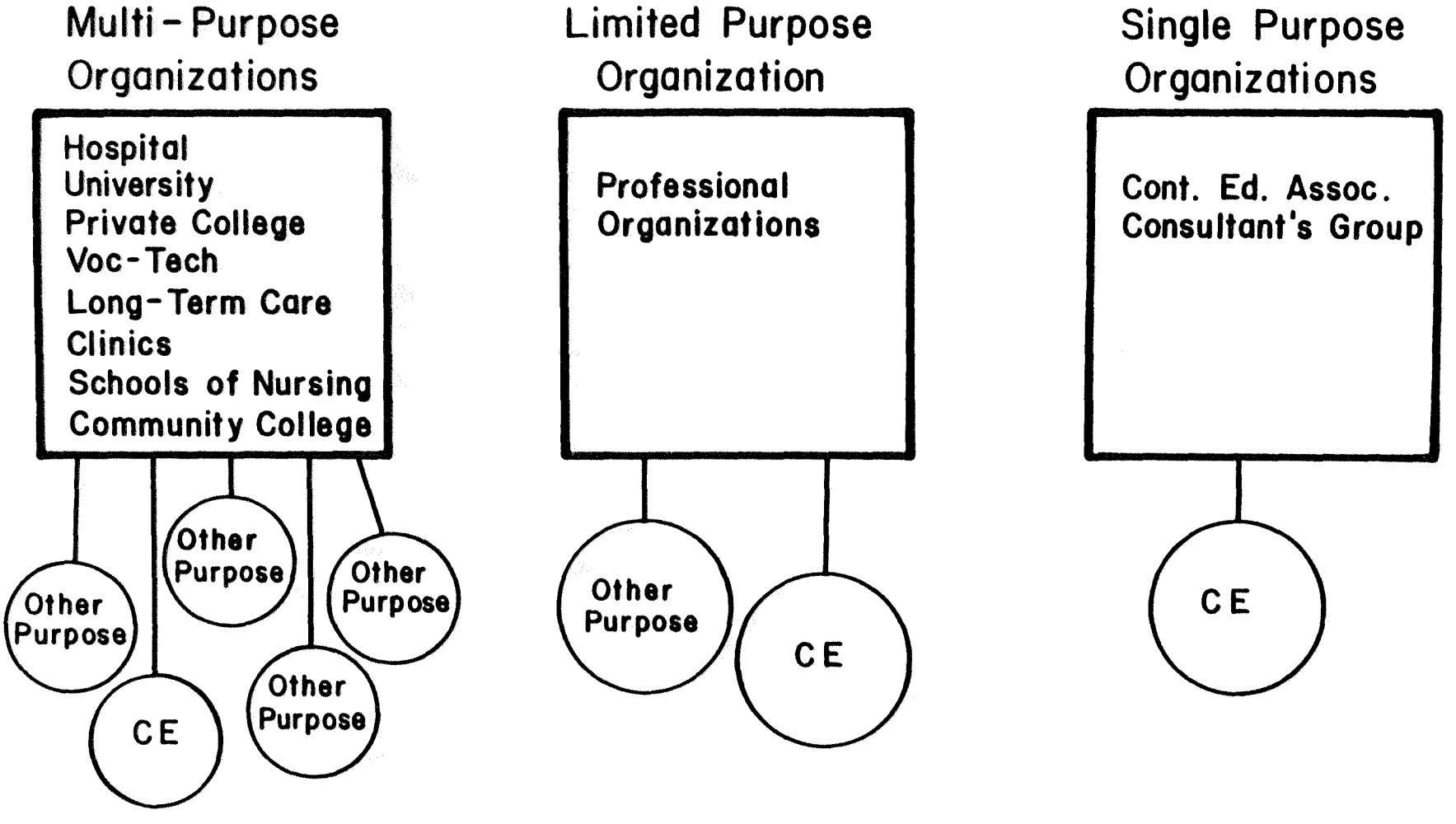

Figure 8. Figure showing types of organizations according to multi, limited and single purpose(s). (CE = Continuing Education.)

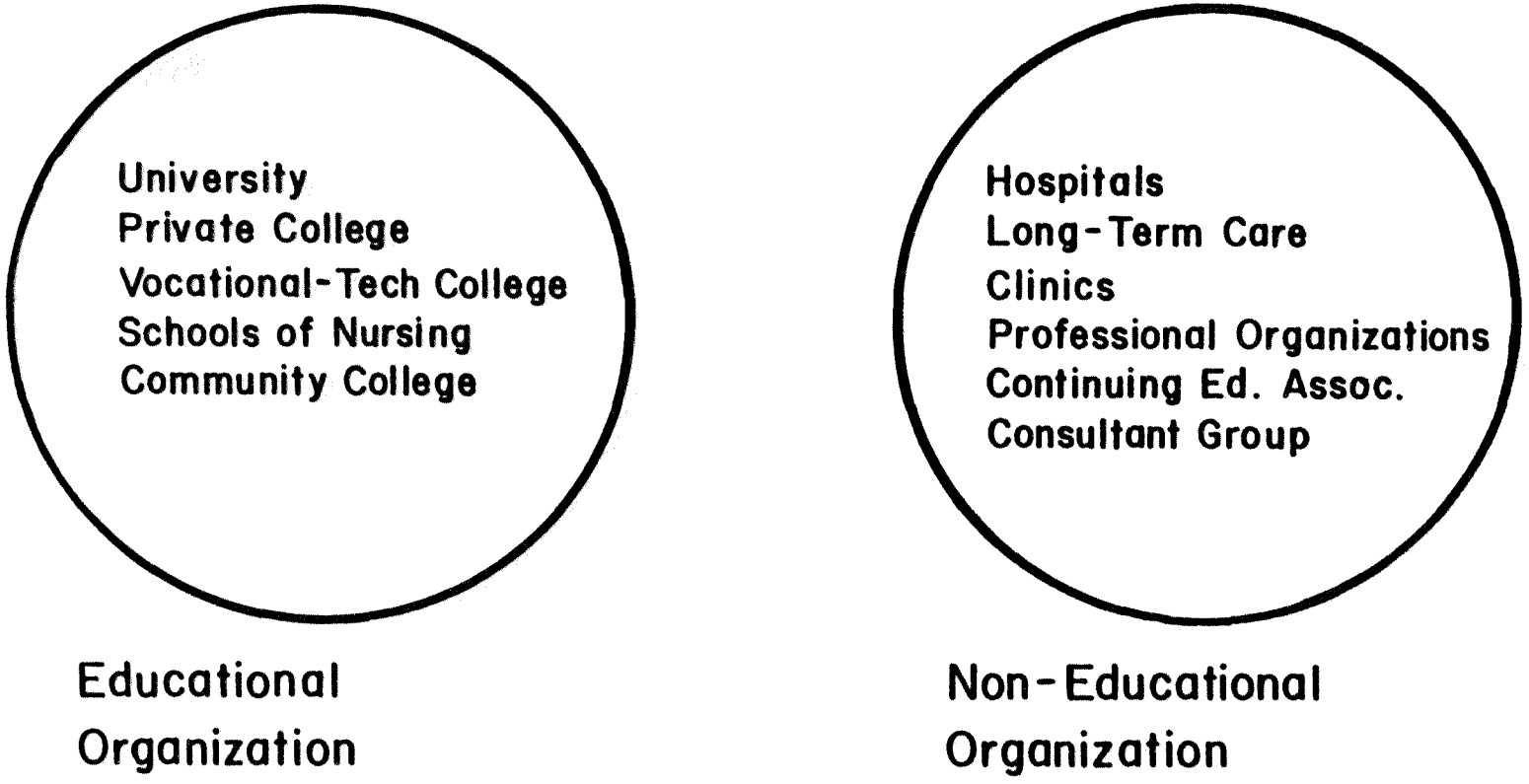

Figure 9. Figure showing the grouping of organizations by primary purpose into educational and non-educational organizations.

Phase I, chi-square and lambda were used to determine if the group of those favoring and the group not favoring mandatory continuing education had any relationship to the type of organization selected. Essentially, is there a difference between these two groups? In Phase II means and standard deviations were calculated for each type of organization for each variable. Further means and standard deviations were calculated for the concepts: Bone-structure, heart-power, nerves, muscles, blood and work for each of the types of organizations. Organizations were grouped according to multi-limited and single-purposed for the same analysis. Finally, organizations were grouped into educational and non-educational for the means and standard deviations. An analysis of variance (ANOVA) was done to determine differences among organizations. Pearson's Correlation was done to determine relationship between each variable and type of organization.

Summary

In Chapter 3 there has been presented the research methodology and data collection for Phase I and Phase II of this study. A conceptual model was presented for organizing the major concepts as identified by the researcher. Finally, the design for grouping of data for analysis was discussed. Statistical treatment was identified.

Chapter 4

PRESENTATION OF DATA AND FINDINGS

Introduction

The purpose of this chapter was to present the data collected in this study and to summarize the findings as they related to the hypotheses stated in this investigation. The data were organized according to the two phases of this study using tables.

For Phase I, the data were presented in order to describe both the population and the respondents in the sample. Data were also presented to describe the type of continuing education program deemed valuable by the respondents and the organization which offered it.

For Phase II, data were presented to describe the type of organization according to the taxonomy utilized in this study. Further, the geographical distribution of the organization was identified and the rural and urban distribution for the county of each identified organization was discussed. Values for all selected variables which were used to describe each organization are shown in tables.

Organizations were then considered within the conceptual model: "The anatomy of an organization." All the

selected variables which have been described were grouped under appropriate subconcepts of this model. Statistical treatment was done to see if there was any relationship between different types of organizations and a selected subconcept.

Finally, organizations were grouped into educational and non-educational, and single, limited, and multipurposed to test for any statistical differences in the groups of organizations.

Phase I

Data which describe the populations. There were 22,681 registered nurses in Iowa as of June 7, 1980, when this study was conducted. In the ninety-nine counties, there is a wide range in distribution of the number of nurses in each county. The range is from twenty-one registered nurses in County #2 (Adams) to 2,888 in County #77 (Polk). Table 3 shows the number of registered nurses in each county. Further, Appendix F shows the number and the name for each county.

Data which describe the sample. A sample was randomly selected from each county in order to get a representation from the total state. Five percent of the nurses in each county was selected. They totaled 1,134. Table 4 displays the number of nurses who were selected from each county. These data were collected to obtain an understanding of Iowa's nursing population and an insight into the

Table 3

Table Showing the Total Population of Registered Nurses for each County as of June 7, 1980

County	# RN	County	# RN	County	# RN	County	# RN	County	# RN
1	31	21	141	41	79	61	67	81	109
2	21	22	87	42	158	62	105	82	1232
3	90	23	471	43	80	63	230	83	112
4	58	24	108	44	147	64	360	84	189
5	54	25	228	45	54	65	66	85	535
6	88	26	89	46	92	66	87	86	107
7	912	27	48	47	50	67	84	87	29
8	191	28	118	48	103	68	47	88	74
9	161	29	375	49	145	69	89	89	32
10	138	30	84	50	174	70	222	90	280
11	147	31	1064	51	98	71	93	91	252
12	82	32	77	52	1687	72	42	92	190
13	125	33	121	53	102	73	101	93	32
14	188	34	143	54	104	74	110	94	427
15	118	35	77	55	121	75	208	95	79
16	97	36	60	56	286	76	87	96	135
17	500	37	132	57	1431	77	2888	97	1072
18	164	38	83	58	48	78	614	98	54
19	76	39	61	59	43	79	121	99	91
20	26	40	118	60	46	80	26		

Table 4

Table Showing the Number of Registered Nurses who were Randomly Selected from each County for the Study Sample

County	# RN	County	# RN	County	# RN	County	# RN	County	# RN
1	2	21	7	41	4	61	3	81	5
2	1	22	4	42	8	62	5	82	62
3	5	23	24	43	4	63	12	83	6
4	3	24	5	44	7	64	18	84	9
5	3	25	11	45	3	65	3	85	27
6	4	26	4	46	5	66	4	86	5
7	46	27	2	47	3	67	4	87	1
8	10	28	6	48	5	68	2	88	4
9	8	29	19	49	7	69	4	89	2
10	7	30	4	50	9	70	11	90	14
11	7	31	53	51	5	71	5	91	13
12	4	32	4	52	84	72	2	92	10
13	6	33	6	53	5	73	5	93	2
14	9	34	7	54	5	74	6	94	21
15	6	35	4	55	6	75	10	95	4
16	5	36	3	56	14	76	4	96	7
17	25	37	7	57	72	77	144	97	54
18	8	38	4	58	2	78	30	98	3
19	4	39	3	59	2	79	6	99	5
20	1	40	6	60	2	80	1		

feelings of the respondents relative to effective organizations which provide nursing continuing education.

A questionnaire was mailed to each of the selected nurses. After a second questionnaire was mailed to non-respondents, a total of 813 or 72 percent of the 1,134 nurses in the selected sample replied. Appendix F shows the percent of non-response for each county. Twenty-eight percent of the sample did not respond.

Data which describe the respondents in the sample. Several attributes of the respondents were explored in order to show that this sample was representative of the total population, and to show that the organizations identified by these nurses would be representative of all organizations in Iowa which provide nursing continuing education.

Rural-Urban. The sample was selected from every county in the state of Iowa, which means that some of the sample live in both urban and rural areas. Table 5 shows the percent urban and the percent rural of those nurses who had been selected and who responded to the questionnaire.

Twenty-nine nurses or 3.6 percent of those who returned the questionnaire did not respond to this question.

Basic preparation. The nurses who were selected and who responded received their basic nursing education in the three major educational programs; namely, 2-year associate degree, 3-year diploma and 4-year baccalaureate. Table 6 shows that the nurses who responded are predominantly diploma

graduates, which reflects the state of Iowa's diploma nurse population. Further, Table 6 shows the number and percent associate degree and baccalaureate nurses.

Table 5

Table Showing the Number and Percent Rural and Urban Nurses who Responded

	Number	Relative Frequency (PCT)	Adjusted Frequency (PCT)
Rural	316	38.9	40.3
Urban	468	57.6	59.7
No Response	29	3.6	
Total	813	100.0	100.0

Table 6

Table Showing the Number and Percent of Diploma, Associate Degree and Baccalaureate Prepared Nurse Respondents

Basic Nursing Education	Frequency	Relative Frequency (PCT)	Adjusted Frequency (PCT)
Diploma	560	68.9	71.6
Associate Degree	109	13.4	13.9
Baccalaureate	113	13.9	14.5
No Response	31	3.8	
Total	813	100.0%	100.0%

Thirty-one nurses or 3.8 percent of the respondents did not answer the question concerning their basic nursing education preparation.

Additional education of the nurse respondents. Most of the nurse respondents did not receive any additional education beyond the basic preparation. Some respondents misunderstood this question. Even though the word additional was underlined in the question, those nurses who indicated their basic nursing preparation was the baccalaureate or associate degree also indicated additional education as "BSN" or "other." The researcher coded this as "none." The following table shows the additional education of those nurses selected and who responded to the questionnaire.

The "other" responses category, which represents 16.5 percent of the respondents, included the following types of educational experiences: (Please note that in cases where the "other" category was selected for more than 10 percent of the responses, a hand analysis was done to determine whether or not a pattern existed, and summary information was presented to clarify responses in that category.)

-BA plus 15 graduate hours

-working on BS in health arts

-47 semester hours in a science major

-family nurse practitioner course

-24-month nurse anesthesia

These examples reflect unique or non-programmatic patterns of additional education. These figures are presented to provide the reader with an insight into the nature of responses in this category.

Table 7

Table Showing the Number and Percent of Nurses who had Additional Education since the Basic Nursing Education Program

Additional Education	Frequency	Relative Frequency (PCT)	Adjusted Frequency (PCT)
BSN	36	4.4	4.8
MA	10	1.2	1.3
MSN	6	.7	.8
Other	124	15.3	16.5
None	576	70.8	76.6
No Response	61	7.5	
Total	813	100.0%	100.0%

Present position in nursing. The respondents' present occupations represent various positions in nursing. Most respondents were staff nurses. Table 8 shows number and percent of the present positions of the nurse respondents.

Table 8

Table Showing the Number and Percent of Nurses in the Different Types of Listed Positions in Nursing

Position in Nursing	Absolute Frequency	Relative Frequency (PCT)	Adjusted Frequency (PCT)
Staff Nurse	381	46.9	48.4
Head Nurse	85	10.5	10.8
Administrator	14	1.7	1.8
Other	149	18.3	18.9
Unemployed	118	14.5	15.0
Educator	40	4.9	5.1
No Response	26	3.2	
Total	813	100.0%	100.0%

Those who indicated that they were unemployed were mostly retired. Others, however, indicated that they had been in nursing only a few years but reported no employment at the time of this study. There were 18.9 percent who indicated that their positions as "other." The types of position listed as an explanation for this option included:

-charge nurse (RN) 3-11

-float pool

-school nurse

-diabetes educator/staff nurse

-MR clinical nurse

-family nurse practitioner student

-self-employed nurse anesthetist

-prenatal instructor

-director employee health-hospital setting.

Type of setting in which respondents were employed. The positions listed in Table 8 may be in various settings. For example, a beginning level position in a hospital or a public health agency could be called a staff nurse. Table 9 shows that 53.4 percent of all nurses are employed in the hospital while only 4.3 percent are employed in a community health setting. It can be surmised that most staff nurses responding to this questionnaire were employed in a hospital setting.

Table 9

Table Showing the Number and Percent of Respondent Nurses in each of the Listed Nursing Settings

Type of Setting	Absolute Frequency	Relative Frequency (PCT)	Adjusted Frequency (PCT)
Hospital	418	51.4	53.4
Community Health	34	4.2	4.3
Education	33	4.1	4.2
Other	181	22.3	23.1
None	117	14.4	14.9
No Response	30	3.7	
Total	813	100.0%	100.0%

The following were among the other settings which were indicated by respondents selecting the "other" category:

-school nurse

-school health service coordinator

-office nursing

-state institution

-office-family practice

-occupational health

-geriatric center

-nursing home

-neurological

Those respondents who indicated "none" (14.4 percent) were unemployed and/or inactive (see Table 10).

Employment status of respondents. Most respondents were employed full-time which accounted for 60.1 percent of the nurses. Twenty-four percent were employed part-time. There were 117 nurses who responded to question thirteen and that they were not in any nursing setting. Yet, 121 nurses in the response to employment indicated that they were unemployed. Table 10 shows the number and percent of nurse respondents who were currently employed full-time, part-time, or unemployed.

Table 10

Table Showing the Number and Percent of Nurses who are Employed Full-time, Part time and Unemployed

Employment Status	Absolute Frequency	Relative Frequency (PCT)	Adjusted Frequency (PCT)
Full-time	473	58.2	60.1
Part-time	193	23.7	24.5
Unemployed	121	14.9	15.4
No Response	26	3.2	
Total	813	100.0%	100.0%

Number of years in present position. It is interesting to note that the respondents in the study sample were mostly in the present position only zero to one year (43.3 percent). One might expect the sample to be mostly new graduates. Yet when responding to the question "How many years have you been in nursing?" 29 percent stated that they have been in nursing over twenty years while 16.2 percent have been in nursing zero to three years. Table 11 displays the number of years the respondents have been in their present positions while Table 12 lists the number of years in nursing for the nurse respondents.

Table 11

Table Showing the Number and Percent of Nurses for each Category Level of Years in the Present Position

Years in Present Position	Absolute Frequency	Relative Frequency (PCT)	Adjusted Frequency (PCT)
0-1 years	334	41.1	43.3
4-7 years	164	20.2	21.3
8-11 years	72	8.9	9.3
> 11 years	123	15.1	16.0
Other	1	.1	.1
Unemployed	77	9.5	10.0
No Response	42	5.2	
Total	813	100.0%	100.0%

Table 12

Table Showing the Number and Percent of Nurses for each Category Level of Years in Nursing

Years in Nursing	Absolute Frequency	Relative Frequency (PCT)	Adjusted Frequency (PCT)
0-3 years	128	15.7	16.2
4-7 years	163	20.0	20.6
8-11 years	118	14.5	14.9
12-15 years	96	11.8	12.1
16-19 years	54	6.6	6.8
> 20 years	232	28.5	29.3
No Response	22	2.7	
Total	813	100.0%	100.0%

Attitude toward mandatory nursing continuing education. The majority of respondents (82.5 percent) favored mandatory continuing education. There were two respondents who marked both "favor" and "not favor" and proceeded to explain that they favored having continuing education for nurses but did not want legislation requiring it. Table 13 shows the number and percent of nurse respondents favoring and not favoring mandatory continuing education.

Table 13

Table Showing the Number and Percent of Nurses who Favor and do not Favor Mandatory Continuing Education

Attitude	Absolute Frequency	Relative Frequency (PCT)	Adjusted Frequency (PCT)
Favor	649	79.8	82.5
Do not favor	136	16.7	17.3
Other	2	.2	.3
No Response	26	3.2	
Total	813	100.0%	100.0%

Nurse respondent profile. Based on the preceding data (the highest percent under each attribute) the profile for the respondent in the sample is listed in Figure 10.

The profile of the sample of respondents selected in Phase I of this study based on the highest percent of each variable has some similarity to the profile (based on the highest percent in similar variables) of the registered nurses in Iowa. These data are based on the RN Stats (Iowa Board of Nursing, 1979 Microfisch) and are displayed in Figure 11.

Data which describe the nursing education programs deemed valuable by the respondents. Respondents who identified programs: Nearly all of the respondents (92.0 percent) indicated some program that they perceived to be helpful to

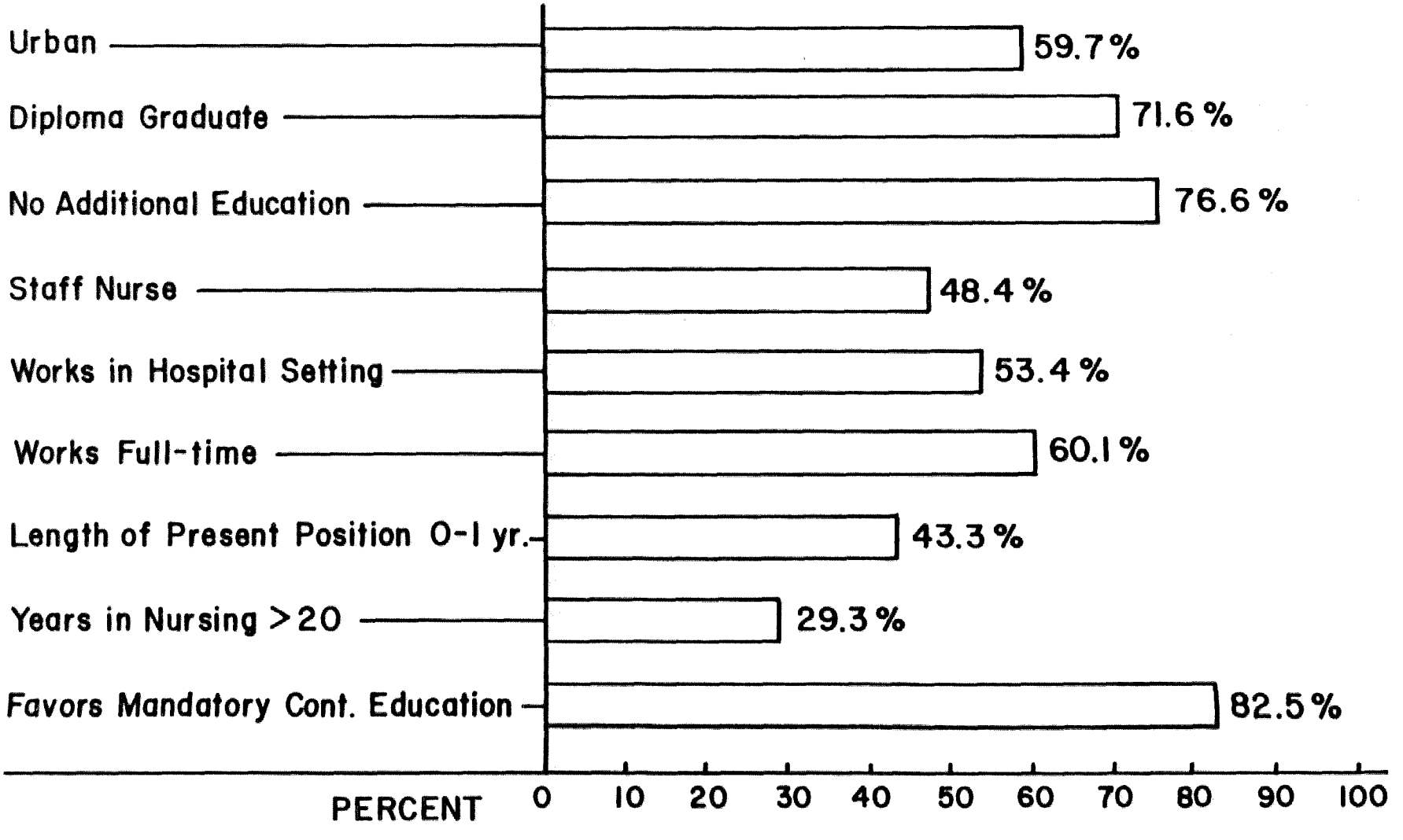

Figure 10. Figure showing the highest percent received in each of the categories describing the respondents in the sample in Phase I of the study.

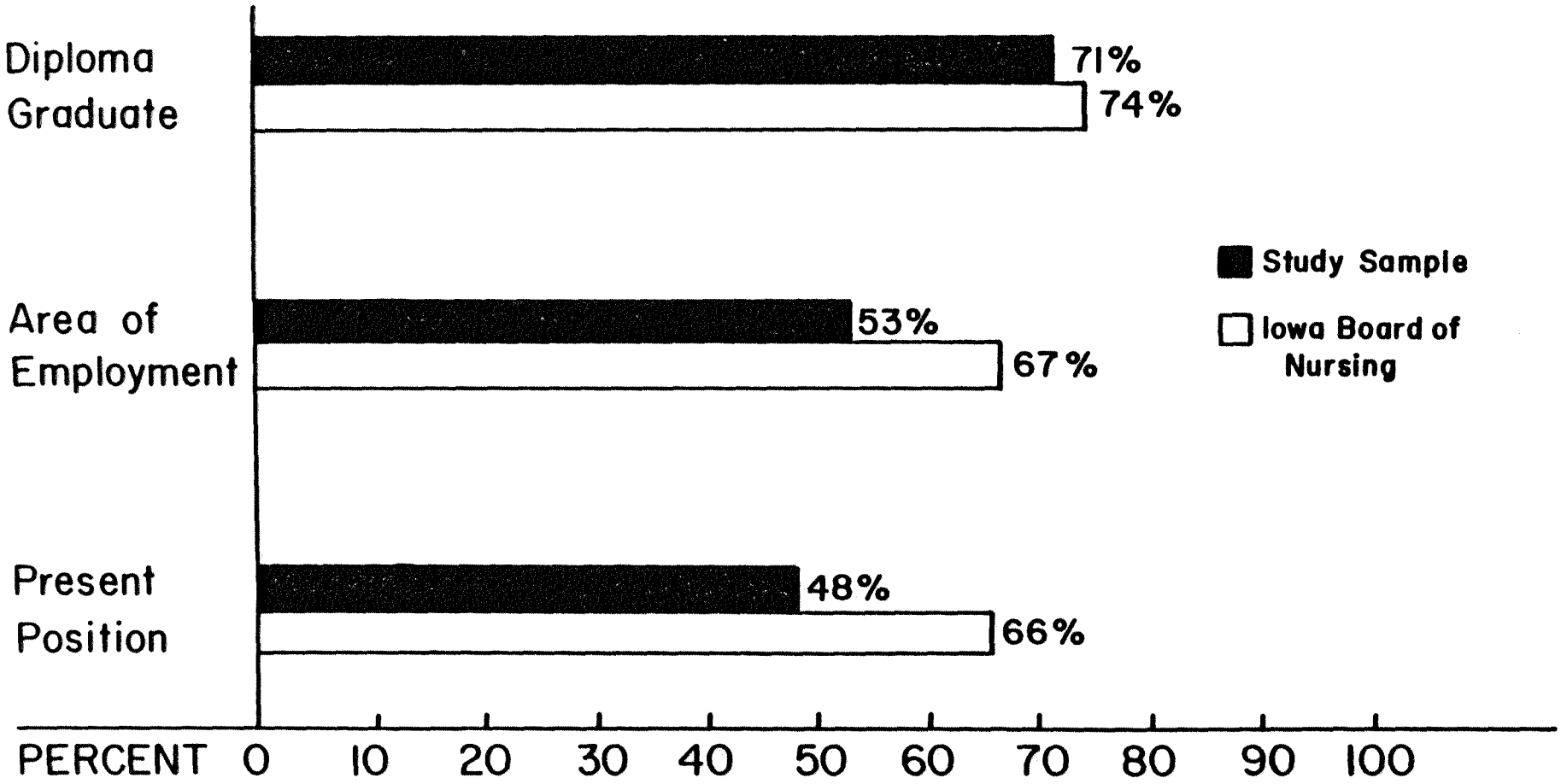

Figure 11. Figure displaying the comparison of respondents in the sample of Phase I to Iowa Board of Nursing statistics on three selected variables.

them during the past year April 1, 1979, to March 31, 1980. The new graduates (4.1 percent) who did not need any continuing education during the first year following graduation and the retired nurses (inactive-2.8 percent) did not list any continuing education programs. There were nine or 1.1 percent of the sample who stated that no program they had attended was valuable. Twenty-six of those returning questionnaires did not respond to this question. Table 14 displays these data.

Table 14

Table Showing the Number and Percent of Nurses who Identified Nursing Continuing Education Programs

Category	Absolute Frequency	Relative Frequency (PCT)	Adjusted Frequency (PCT)
Listed Program	724	89.1	92.0
None Helpful	9	1.1	1.1
New Graduates	32	3.9	4.1
Not Active	22	2.7	2.8
No Response	26	3.2	
Total	813	100.0%	100.0%

Types of programs identified as valuable. The programs listed by the respondents were coded according to the following taxonomy developed by the researcher and were based upon the usual usage of these terms as found in nursing

education and literature. The variables used in this taxonomy include:

Nursing: Any program concerned with the nursing care, treatment, diagnosis in any medical, surgical, mental health, community, obstetrical and pediatric type of nursing.

Nursing Process: Any program which stressed the assessment, nursing diagnosis, planning, intervention and evaluation strategies used in nursing.

Management: Any program which encompassed management techniques and strategies.

Liberal Arts: Any program which offered natural science, social science and humanities as the subject matter.

Teaching: Any program which stressed teaching-learning strategies as the major focus.

Other: All other programs which did not fit into the above taxonomy and/or were too briefly described for an appropriate evaluation.

Of the total respondents, 32.6 percent identified most often continuing education programs about nursing as being most valuable. After nursing, the category most often selected by nurses (26.1 percent) was liberal arts. Nursing process was also seen by 18.5 percent of the nurses to be of value. Management was seen by 3.2 percent of the nurses as valuable, and teaching was seen by 1.8 percent of the nurses as valuable. Eighty-five nurses (10.5 percent) did not describe the program they had listed. There were 130 nurses (17.9 percent) who listed programs that did not fit into the above categories. Some listed as "others" include:

-Course was on cardio-pulmonary resuscitation

-antibiotics and which microorganisms they are most effective against

-Ethical/legal trends in nursing

-Credits toward a degree

-Study classification of drugs

-Basic life support

-Several aspects of anesthesia and post-anesthesia

-Medical-surgical condition seen in family practice

Table 15 displays the number and percent of nurses selecting programs in each of the program categories.

Table 15

Table Displaying the Number and Percent of Nurses Selecting each of the Types of Programs Categorized by the Taxonomy

Type of Nursing Continuing Education Program	Absolute Frequency	Relative Frequency (PCT)	Adjusted Frequency (PCT)
Nursing	237	29.2	32.6
Nursing Process	135	16.6	18.5
Management	23	2.8	3.2
Liberal Arts	190	23.4	26.1
Teaching	13	1.6	1.8
Other	130	16.0	17.9
No Response	85	10.5	
Total	813	100.0%	100.0%

Reason given by respondents for program deemed valuable. The reasons that respondents deemed a program valuable were coded by the researcher into a particular category when the respondent stated the exact word or words that had a similar meaning to any of the categories. The taxonomy developed for the coding of these respondents' reasons for a particular program was:

-helped get needed continuing education units
-needed for job
-new information
-meet other professionals
-new insights for self
-improve nursing practice
-required for a degree
-other
-no response

If the respondent gave more than one statement which included more than one category in the taxonomy, the first statement made by the respondent was used for coding purposes as this was considered by the researcher to be the main reason of the respondent.

The respondents (62.7 percent) indicated that the continuing education programs were needed for the job. "New insights for self" was given by 20.6 percent of the nurses as the reason for the program being valuable. Fewer respondents (2.2 percent) saw the programs to be valuable

because of being needed to get mandatory continuing education. Other reasons programs were deemed valuable were: to meet other professionals, 0.7 percent; to improve nursing practice, 2.7 percent; and required for a degree, 2.0 percent. Some nurses (7.9 percent) did see the value of the identified program resulted in obtaining new information. Table 16 displays the number and percent of nurses in each category of reasons given for a continuing education program being valuable.

Table 16

Table Showing the Number and Percent of Nurses in each Category Showing Reasons a Continuing Education Program was Valuable to the Nurse

Category	Absolute Frequency	Relative Frequency (PCT)	Adjusted Frequency (PCT)
Helped get CEU	16	2.0	2.2
Needed for job	460	56.6	62.7
New information	58	7.1	7.9
Meet other Professionals	5	.6	.7
New insights for self	151	18.6	20.6
Improve nursing practice	20	2.5	2.7
Required for a degree	15	1.8	2.0
Other	9	1.1	1.2
No Response	79	9.7	
Total	813	100.0%	100.0%

Continuing education program costs. Nurses may have selected a particular program and thus an organization because of the cost of the program rather than because of the quality of the program or the effectiveness of an organization. Table 17 shows that most nurses (44.9 percent) identified programs in the under $20 category with $21-$40 the next most often selected (33.9 percent) category. Some nurses (12.5 percent) did not respond, whereas 2.3 percent indicated that they paid part and their employer part. However, they did not know the total cost. Very few nurses (14.7 percent) selected programs which cost above the $40 level.

The respondents were asked who paid for the nursing continuing education as this may have influenced the choice of program. The data revealed that most nurses, 57.9 percent, paid for their own continuing education program. However, 33 percent indicated that all of the cost was paid by the employer. Since 48.4 percent of the respondents were staff nurses and 53.4 percent worked in a hospital setting, it was assumed that the cost of continuing education was a fringe benefit provided by the hospital.

Table 17

Table Showing the Fee for Nursing Continuing Education Programs and the Number and Percent of Nurses who Identified Programs in each Fee Category

Category	Absolute Frequency	Relative Frequency (PCT)	Adjusted Frequency (PCT)
Under $20	319	39.2	44.9
$21-40	241	29.6	33.9
$41-60	49	6.0	6.9
$61-80	14	1.7	2.0
$81-100	17	2.1	2.4
$101-120	8	1.0	1.1
$121-140	16	2.0	2.3
Other	47	5.8	6.6
No Response	102	12.5	
Total	813	100.0%	100.0%

Table 18 shows the responses of the nurses indicating who paid for the continuing education program.

Table 18

Table Showing the Number and Percent of Nurses who Indicated if the Employer paid all, Part or None of the Fee for the Continuing Education Program

Paid by Employer	Absolute Frequency	Relative Frequency (PCT)	Adjusted Frequency (PCT)
All	250	30.8	33.9
Part	61	7.5	8.3
None	427	52.5	57.9
No Response	75	9.2	
Total	813	100.0%	100.0%

Length of identified continuing education programs and number of continuing education units (CEU's) received for them. The respondents identified the length of the program and the CEU's received. Most programs were four to six hours in length as indicated by 51.3 percent of the respondents, and most respondents (36.4 percent) indicated they received 0.4-0.6 CEU's for the identified program. (CEU's are based on contact hours. For example, 15 contact hours is equal to 1.5 CEU's.) Table 19 displays the length of program categories with the number and percent of the respondents for each category.

Table 19

Table Showing the Number and Percent of Respondents who Indicated Length of Program in Hours, Days, Weeks, and Other

Length of Program	Absolute Frequency	Relative Frequency (PCT)	Adjusted Frequency (PCT)
Hours	376	46.2	51.3
Days	258	31.7	35.2
Weeks	64	7.9	8.7
Other	35	4.3	4.8
No Response	80	9.8	
Total	813	100.0%	100.0%

Table 20 displays the CEU's received for the identified programs.

Table 20

Table Showing the Number and Percent of Nurse Respondents who Indicated CEU's Received for the Identified Program

Number of CEU's	Absolute Frequency	Relative Frequency (PCT)	Adjusted Frequency (PCT)
.1-.3	55	6.8	7.6
.4-.6	262	32.2	36.4
.7-.9	158	19.4	21.9
1.0-1.1	33	4.1	4.6
1.2-1.5	80	9.8	11.1
1.6-1.7	32	3.9	4.4
> 1.7	100	12.3	13.9
No Response	93	11.4	
Total	813	100.0%	100.0%

Types of organizations identified by nurses. Each respondent was asked which organization provided the nursing continuing education program he/she had identified. The organization most often identified by the nurses (26.6 percent) was the hospital. After the hospital organization, the organization most often identified by the nurses (23.1 percent) was the community college. The university was selected by 15.1 percent of the nurses. Some nurses (9.8 percent) did not identify an organization in response to that question. Table 21 shows the number and percent of

nurses who selected each of the organizations as listed in the taxonomy.

Table 21

Table Showing the Number and Percent of Respondents for each Identified Type of Organization

Types of Organizations	Absolute Frequency	Relative Frequency (PCT)	Adjusted Frequency (PCT)
Hospital	195	24.0	26.6
Community College	169	20.8	23.1
Clinic Center	9	1.1	1.2
Voc-Tech College	64	7.9	8.7
University	111	13.7	15.1
Private College	22	2.7	3.0
Consultants Group	42	4.2	5.7
Professional Association	54	6.6	7.4
Continuing Education Assoc.	44	5.4	6.0
Long-Term Care	2	.2	.3
Other	16	2.0	2.2
Diploma School of Nursing	5	.6	.7
None Listed	80	9.8	
Total	813	100.0%	100.0%

Data which describe attitude toward mandatory continuing education and the influence of this variable. Mandatory nursing continuing education had only been in effect for one year, April 1, 1979-March 31, 1980, before this study was completed in June 7, 1980. The researcher wanted to ascertain if attitudes toward mandatory continuing education would influence the types of programs identified as of value and the organizations which provided them. Cross-tabulation was done of types of programs identified and attitude. Table 22 displays these data.

Attitude toward mandatory nursing continuing education and the type of organization identified were analyzed. Table 23 shows these data.

The comparison of the percent of all nurses in the sample and the percent of those favoring mandatory nursing continuing education and the organizations identified by these two groups as providing valuable continuing education is shown in Figure 12. For almost all of the types of organizations selected there is little difference between the total sample and the sample supporting mandatory continuing education.

Table 22

Table Displaying Number and Percent of Respondent's Attitude Toward Mandatory Nursing Continuing Education and Type of CE Program Deemed Valuable

Attitude Toward Mandatory Continuing Education	Nursing	Nursing Process	Management	Liberal Arts	Teaching	Other	Total
Should be	189 26.3%	115 16%	21 2.9%	150 20.9%	11 1.5%	109 15.2%	595 82.8%
Should not be	43 6.0%	18 2.5%	2 .3%	38 5.3%	2 .3%	20 2.8%	123 17.1%
Other	1 .1%						1 .1%
Totals	233 32.4%	133 18.5%	23 3.2%	188 26.1%	13 1.8%	129 17.9%	719 100%

Number of No Responses = 94.

Table 23

Table Displaying the Number and Percent of Respondents Favoring and not Favoring Mandatory CE and the Type of Organization Identified

	Type of Organization												
Attitudes	Hospital	Comm. College	Clinic	Voc-Tech.	Univ.	Private College	Cons. Group	Prof. Assoc.	Cont. Ed. Assoc.	Long-Term Care	Other	Diploma Sch. of Nursing	Total
Should be	160	139	8	50	91	16	36	45	34	2	13	5	599
	22.1%	19.2%	1.1%	6.9%	12.6%	2.2%	5.0%	6.2%	4.7%	.3%	1.8%	.7%	82.7%
Should not be	34	26	1	13	18	6	6	7	10		3		124
	4.7%	3.6%	.1%	1.8%	2.5%	.8%	.8%	1.0%	1.4%		.4%		17.1%
Other	1												1
	.1%												.1%
Totals	194	166	9	63	109	22	42	52	44	2	16	5	724
	26.8%	22.9%	1.2%	8.7%	15.1%	3.0%	5.8%	7.2%	6.1%	.3%	2.2%	.7%	100%

Number of No Responses = 89.

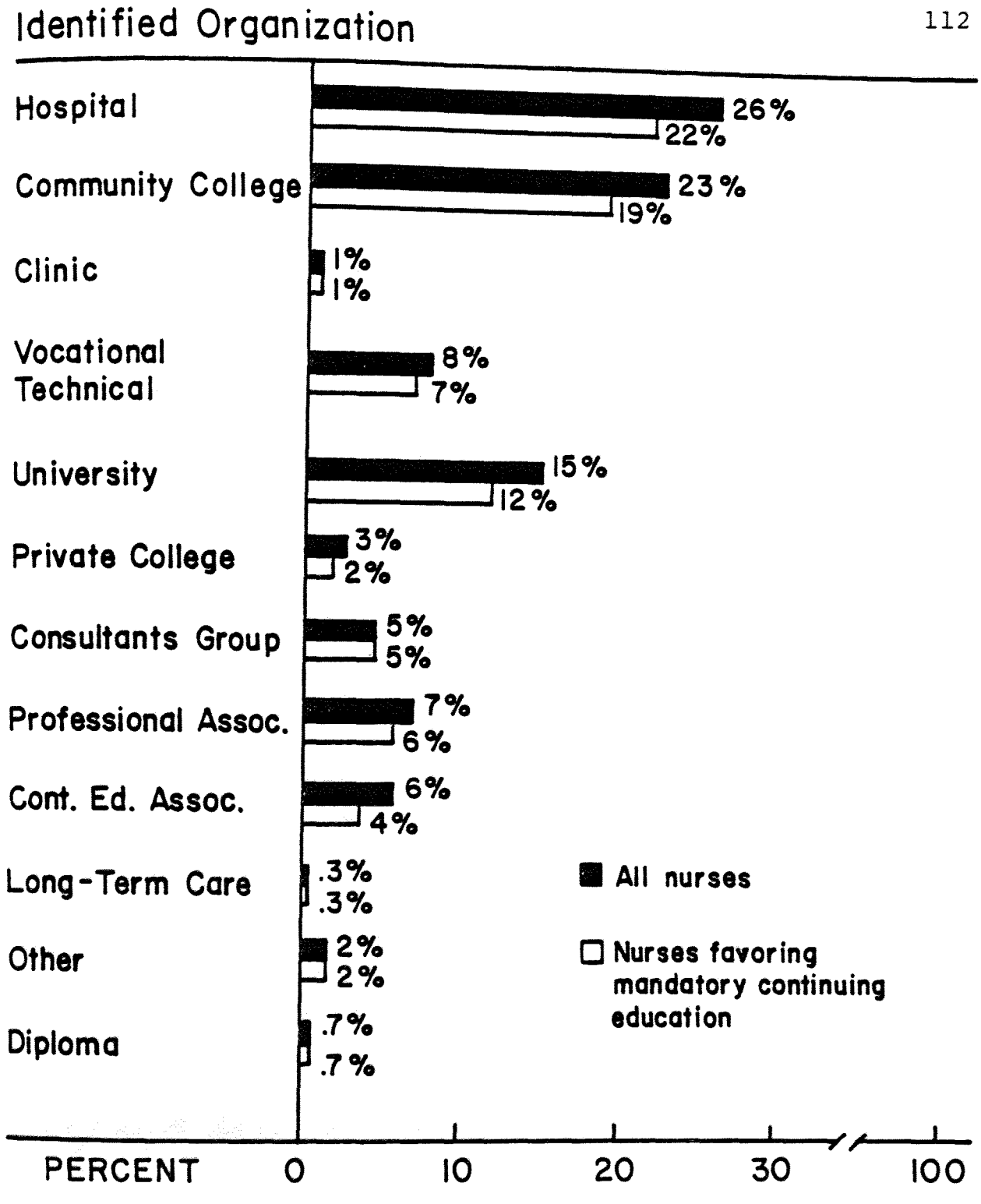

Figure 12. Figure displaying the comparison of the percent for each type of organization selected by all nurses in the sample and by those nurses favoring mandatory nursing continuing education.

Phase II

For Phase II of this study, an analysis was made of a selected sample of the organizations which were identified by the respondents of registered nurses in Phase I of this study. This analysis was done by using selected tools to describe the variables identified by Price and as delineated in Chapter 3. The researcher used this method to see if these components were present in all of the different types of organizations. Further, the researcher wanted to determine to what extent these were present and if these components varied in quantity among the eleven different types of organizations studied.

The conceptual model "The anatomy of an Organization" was used to group the variables around the major concepts: Bone (structure), heart (power), nerves (communication), muscle (budget), blood (motivation), and work (effectiveness) to compare the different type organizations.

The organizations were then grouped into educational and non-educational and analyzed on the major concepts of the model. Finally, the organizations were grouped into multi, limited, and single purpose, and the data were analyzed for differences among these groups.

Data which describe all organizations. First, the researcher looked at all organizations grouped together to see if the individual component variables were present. The frequency and percent of all values for each of the

variables are used to describe the organizations. Each of these variables is listed in alphabetical order to assist the reader.

Administrative staff. Most organizations had either only part-time help (35.7 percent) or one to two full-time (35.7 percent) secretarial staff. Table 24 displays these data.

Table 24

Table Displaying Frequency and Percent of Organizations with Zero to Eleven Full-time Administrative Staff

	Frequency	Frequency Percent	Cumulative Frequency
No one	1	3.6	3.6
Only PT	10	35.7	39.3
1-2 FT	10	35.7	75.0
3-5 FT	5	17.9	92.9
6-8 FT	1	3.6	96.4
9-11 FT	1	3.6	100.0
Totals	28	100.0%	

Autonomy. Most of the organizations, 75 percent, received a total score of nine or less out of a possible eighteen points for having autonomy within the nursing continuing education organization. Six points out of a possible eighteen was the most frequent score (21.4 percent) for

autonomy in the organization studied. These data are displayed in Table 25. The higher the score the more decisions were made within the organization.

Table 25

Table Displaying Frequency and Percent of Organizations and the Scores Received for Autonomy

	Value	Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
Low Autonomy	2	1	3.6	3.6
	5	2	7.1	10.7
Total	6	6	21.4	32.1
	7	4	14.3	46.4
	8	3	10.7	57.1
Score	9	5	17.9	75.0
	11	1	3.6	78.6
	12	1	3.6	82.1
	13	1	3.6	85.7
	14	2	7.1	92.9
	16	1	3.6	96.4
High Autonomy	18	1	3.6	100.0
Total		28	100.0	

Centralization. This tool measured the extent to which the organization participated in decision making. The lower the score, the higher the degree the nursing continuing

education director participated in decisions which affected his/her or organization or subunit. The selected organizations in this study have a high degree of centralization as 50 percent have a score of one. There are 32 percent which have a score of two. Table 26 displays these data.

Table 26

Table Displaying the Number and Percent of Organizations' Mean Scores for Centralization

Mean Score for Centralization	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
1	14	50.0	50.0
2	9	32.1	82.1
3	2	7.1	89.3
4	2	7.1	96.4
5	1	3.6	100.0
Total	28	100.0%	

Communication. Communication was examined from various aspects. Communication was examined as to adequacy, that is, the kind of communication received from a superior; as to amount of communication the director of continuing education had with the superior; and as to the quality of that communication with a superior. For example, did the superior express appreciation for the work being done? Did the superior ask for advice, give directions, show

confidence, give criticisms or give unnecessary comments? Informal communication was also examined. Again amount of informal communication was measured, the position of person with whom the director of continuing education talked and how frequently did he/she talk informally about ways continuing education could be improved and/or better coordinated. These data are displayed in Tables 27 through 32.

Adequacy of Communication. Most directors of nursing continuing education (67.9 percent) in this sample believed that there was appropriate communication between themselves and their superiors.

Table 27

Table Displaying Frequency and Percent of the Organization Directors Evaluation of Adequacy of the Communication of their Superiors

Adequacy	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
Appropriate	19	67.9	67.9
Often Appropriate	6	21.4	89.3
Uncertain	3	10.7	100.0
Total	28	100.0%	

Amount of Communication. Most directors (32.1 percent) spent one to two hours per week communicating with their superiors.

Quality of Communication. Half of the directors

stated that their superiors expressed appreciation for their work. However, eleven, or 39.3 percent, only had this input sometimes.

Table 28

Table Displaying the Frequency and Percent for each Category of Time Spent by Directors on Communication with Superiors

Amount of Time	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
< 1/4 hr. per week	4	14.3	14.3
1/4-1/2 hr. per week	2	7.1	21.4
1/2-1 hr. per week	6	21.4	42.9
1-2 hrs. per week	9	32.1	75.0
2-4 hrs. per week	5	17.9	92.9
> 4 hrs. per week	2	7.1	100.0
Total	28	100.0%	

Table 29

Table Displaying the Number and Percent of Those Directors Whose Superiors Expressed Appreciation for their Work

Expressed Appreciation	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
Always	3	10.7	10.7
Often	14	50.0	60.7
Sometimes	11	39.3	100.0
Total	28	100.0%	

Informal Communication Amount of Time. Most directors of nursing continuing education spent one-half to one hour in informal communication. It was surprising that six directors or 21.4 percent of the sample spent over six hours in informal communication. Table 30 displays these data.

Table 30

Table Showing the Frequency and Percent of Time Spent by Directors of Nursing Continuing Education in Informal Communication.

Amount of Time	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
< 1/2 hr. per week	3	10.7	10.7
1/2-1 hr. per week	8	28.6	39.3
1-2 hrs. per week	4	14.3	53.6
2-4 hrs. per week	6	21.4	75.0
4-6 hrs. per week	1	3.6	78.6
> 6 hrs. per week	6	21.4	100.0
Total	28	100.0%	

Informal Communication Position of Person in the Organization. Over half of the directors of nursing continuing education talk informally with someone lower in the organization. These data are displayed in Table 31. As one director stated, "There is no one else in this office except my secretary and myself." These data are displayed in Table 24 which shows that most nursing continuing education organizations are small.

Table 31

Table Displaying the Number and Percent of Directors and the Categories of People with whom they Communicate Informally

Position in the Organization	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
Lower than the director	16	57.1	57.1
Same level	10	35.7	92.9
Immediate superior	1	3.6	96.4
Higher than director but not superior	1	3.6	100.0
Total	28	100.0%	

Informal Communication and Nursing Continuing Education. Table 32 displays the data related to informal communication. Topics most often and most frequently discussed informally were ways to improve nursing continuing education (28.6 percent) and ways to improve the coordination of nursing continuing education (25 percent). Employees wages and benefits were discussed least often (92.9 percent) by the directors of continuing education.

Coordination. The coordination of different departments and/or sections of a given organization was seen by almost all of the directors of nursing continuing education to be an accomplished fact. In response to four questions, the average was scored and recorded. Most responses were

Table 32

Table Displaying the Frequency and Percent of Directors for Selected Times Talking Informally on Specified Topics

Informal Topics	Once a month or less	2-3 times a month	Once a week	Several Times a week	Once a day or more often	Total
Ways Continuing Education can be improved	9 32.1%	4 14.3%	6 21.4%	8 28.6%	1 3.6%	28
Ways coordination of Cont. Ed. can be improved	9 32.1%	8 28.6%	4 14.3%	7 25.0%	0	28
Employee Wages benefits	26 92.9%	2 7.1%	0	0	0	28
Working relations could be improved between departments	16 57.1%	5 17.9%	5 17.9%	2 7.1%	0	28
Ways to improve staff morale	15 53.6%	6 21.4%	5 17.9%	2 7.1%	0	28
Things and happenings outside of organization	6 21.4%	4 14.3%	6 21.4%	5 17.9%	7 25.0%	28

the "agree" (53.6 percent) category. The "strongly agree" category was next (42.9 percent) whereas one director was uncertain that coordination occurred.

In response to this achieving a singleness of purpose through coordination or as Price called it, the reliability of the organization, was assessed. The directors of organizations were almost certain, with eleven stating that a singleness of purpose always occurred, while seventeen stated this often occurred. Table 33 shows these data.

Table 33

Table Displaying the Frequency and Percent of Directors and the Perceived Level of Coordination and Reliability

Coordination Coordination Occurs	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
Strongly agree	12	42.9	42.9
Agree	15	53.6	96.4
Uncertain	1	3.6	100.0
Total	28	100.0%	
Reliability **Achieve singleness of Direction**	**Absolute Frequency**	**Relative Frequency (PCT)**	**Cumulative Frequency (PCT)**
Always	11	39.3	39.3
Often	17	60.7	100.0
Total	28	100.0%	

Dispersion. There is limited geographical dispersion of most of the nursing continuing education organizations that were part of this study. Table 34 displays the data which show that twenty-one of the twenty-eight organizations are all located at a single, individual site.

Table 34

Table Displaying the Frequency and Percent of Directors and the Dispersion of Their Organization

Dispersion	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
All at one site	21	75.0	75.0
Less than 25% at one site	3	10.7	85.7
More than 50% at one site	3	10.7	96.4
More than 75% at one site	1	3.6	100.0
Total	28	100.0%	

Effectiveness. Effectiveness as used by this researcher in this study is linked with the work of the organization. The main work of nursing continuing education organizations is providing programming for nurses. Since only those organizations selected for this study were those which had been identified by nurses as providing a quality program. The data describing the work of these organizations

should give a general profile of the nursing continuing education programming of an effective organization. Most organizations (46 percent) offered over twenty programs annually with an average of one to fifty participants (42.9 percent) lasting one to two days (67.9 percent) and with a registration fee of $0-20 (64.3 percent). Table 35 displays these data.

Formalization. Formalization of an organization is reflected in the written procedures, policies, job descriptions, contracts, and philosophy. The directors of organizations in this study, in response to a set of fifteen questions, identified that 60.7 percent of them had a high degree of formalization. In response to what written formal documents the organization had, the directors' responses showed that the organizations had a high degree of formalization. Table 36 displays these data.

Mechanization. Mechanization/technology or the number of inanimate objects that are used in organizations was assessed. A listing of such aids as computer, word processor, television, 16mm projector, and slide projector was made for each organization and scored. Most organizations had four or five useful devices. Table 37 displays these data.

Table 35

Table Displaying the Number and Frequency of Organizations' Directors Responses Describing the Effectiveness of the Organization as Related to Average Number of CE Programs Offered Annually, Average Length of Program, Average Number of Participants and Average Cost of Programs

	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
Average Number of Participants			
1-50	12	42.9	42.9
51-100	11	39.3	82.1
101-150	2	7.1	89.3
151-200	1	3.6	92.9
> 200	2	7.1	100.0
Average Length of Programs			
< 1/2 day	7	25.0	25.0
1-2 days	19	67.9	92.9
Over 4 days	2	7.1	100.0
N.B. No program was listed as 3-4 days			
Average Cost of Program			
0-20 dollars	18	64.3	64.3
21-40 dollars	7	25.0	89.3
61-81 dollars	1	3.6	92.9
81-100 dollars	1	3.6	96.4
> 140 dollars	1	3.6	100.0
N.B. No programs were listed for the following categories: $41-60; $101-120; $121-140.			

Table 35 (continued)

	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
Average Number of Programs Annually			
1-5	8	28.6	28.6
6-10	3	10.7	39.3
11-15	1	3.6	42.9
16-20	3	10.7	53.6
> 20	13	46.4	100.0

Table 36

Table Displaying Frequency and Percent of Organizations and the Degree of Formalization. The Lower the Score the Higher the Degree of Formalization.

PART A: Formalization Mean Score

Mean Value		Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
1	High Formalization	1	3.6	3.6
2		16	57.1	60.7
3		9	32.1	92.9
4	Low Formalization	2	7.1	100.0
Total		28	100.0%	

PART B: Number of Written Documents

Total Score	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
15	3	10.7	10.7
16	3	10.7	21.4
17	4	14.3	35.7
18	2	7.1	42.9
19	3	10.7	53.6
20	3	21.4	64.3
21	6	21.4	85.7
22	4	14.3	100.0
Total	28	100.0%	

N.B. Higher the score, the greater the formalization.

Table 37

Table Displaying the Frequency and Percent of Organizations and the Degree of Mechanization. For each Mechanical Device two Points were Given. The Higher the Score the Greater the Degree of Mechanization.

Degree of Mechanization			
Total Score	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
6	4	14.3	14.3
8	7	25.0	39.3
10	6	21.4	60.7
12	2	7.1	67.9
14	4	14.3	82.1
16	4	14.3	96.4
18	1	3.6	100.0
Total	28	100.0%	

Motivation. Motivation of the director or manager of the organization was assessed, using a twenty-item series of statements to which the director responded. A sum of the total scores for each statement was made. The higher the score, the lower the involvement. On a scale of possible scores of 20 to 100 with twenty being highly motivated to low motivation at one hundred (see scale), the directors showed a relatively high degree of motivation with nearly half of the sample scoring 58 or below. Table 38 displays these data.

Table 38

Table Displaying Frequency and Percent of Directors and the Degree of Motivation. The Lower the Score the Higher the Degree of Motivation.

	Degree of Motivation		
Sum Total Score	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
47	1	3.6	3.6
48	1	3.6	7.1
50	1	3.6	10.7
51	1	3.6	14.3
52	3	10.7	25.0
53	2	7.1	32.1
55	2	7.1	39.3
56	1	3.6	42.9
58	3	10.7	53.6
59	5	17.9	71.4
60	2	7.1	78.6
61	1	3.6	82.1
63	1	3.6	85.7
65	1	3.6	89.3
66	1	3.6	92.9
67	1	3.6	96.4
68	1	3.6	100.0
Total	28	100.0%	

	High				Low
Percent		25%	50%	75%	
Scores	20	52	58	59	100

Bases of Power. Power as used in this study was analyzed as it refers to the power base upon which the director was perceived to function with his/her immediate supervisor. A series of five statements were read and the director ranked them one through five with one being the most important. Only the category that was ranked first by the director was recorded. The five possible bases of power were:

1 - referent

2 - expert

3 - reward

4 - legitimate

5 - coercive

Most of the directors (50 percent) perceived they functioned from an expert base of power. The statement which reflected this type of power was: "You respect the competence and judgment of the individual about things with which the person is more experienced than you are." (See Appendix J for other statements.) Table 39 displays these data.

Table 39

Table Displaying the Frequency and Percent of Directors and the Perceived Base of Power Present in their Organizations

Base of Power	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
Referent 1	8	28.6	28.6
Expert 2	14	50.0	78.6
Legitimate 4	5	17.9	96.4
Coercive 5	1	3.6	100.0
Total	28	100.0%	

N.B. No director selected #3 Reward as his/her base of power.

Routinization. The directors were asked if they perceived their job to be routine. Most directors perceived their tasks to be highly non-routine. Yet the directors as identified earlier (Table 36) stated that there was a high degree of formalization. The study of relationship of formalization and routinization is not a part of this study, but it might be hypothesized that the more structure or formalization, the more routine an organization would be. Table 40 displays these data.

Table 40

Table Displaying the Frequency and Percent of Directors and the Degree of Routinization. The Higher the Score in Part A the more non-routine the Task. The Lower the Score in Part B, the More Non-routine.

Part A			
Routinization	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
Highly Routine - 1	0	0	0
Somewhat Routine	3	10.7	10.7
Somewhat Non-routine - 3	3	10.7	21.4
Highly Non-routine - 4	22	78.6	100.0
Total	28	100.0%	

Part B			
Average	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
Non-Routine			
1	1	3.6	3.6
2	19	67.8	71.4
Routine			
3	8	28.6	100.0
Total	28	100.0%	

The directors were then asked to respond to four statements concerning the routine or non-routine nature of their task. A mean score was recorded. The lower the score the more non-routine is the task as perceived by the director.

The degree of satisfaction within each of the organizations was measured by the response of the directors to a series of twelve statements. The statement was read and three questions were asked:

How much is there now?

How much should there be?

How important is this to you?

The response value to "How much is there now?" was subtracted from the value given to "How much should there be?" Further, all the questions were grouped into the following categories for final scoring:

Types of Satisfaction:

Security - Statement 6

Social - Statements 10 and 12

Esteem - Statements 1, 4 and 8

Autonomy - Statements 2, 5 and 11

Self-realization - Statements 3, 7 and 9

The lower the score, the higher the degree of satisfaction in all categories. Table 41 displays these data.

Table 41

Table Displaying the Frequency and Percent of the Directors and the Degree of Satisfaction in Five Categories. The Lower the Score the Higher the Degree of Satisfaction.

	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
Security			
0	18	64.3	64.3
1	9	32.1	98.4
2	1	3.6	100.0
Social			
0	20	71.4	71.4
1	8	28.6	100.0
Esteem			
0	13	46.4	46.4
1	12	42.9	89.3
2	3	10.7	100.0
Autonomy			
0	20	71.4	71.4
1	7	25.0	96.4
2	1	3.6	100.0
Self-Realization			
0	11	39.3	39.3
1	12	42.9	82.1
2	5	17.9	100.0

The score for the importance of each area was analyzed separately. The higher the score, the more important was this area of satisfaction. The directors felt that security and self-realization were most important to them,with esteem being least important. Table 42 displays these data.

Size. The size of the organization was measured in two ways. One way was the number of personnel (with college degrees) and administrative staff (secretaries, administrative assistants). The other way was the size of the budget. The administrative staff has already been reported in Table 24 earlier in this chapter. Most organizations (67.9 percent) in this study had one to two people full time in the organization. Further, most organizations (39.3 percent) had budgets of over $20,000,while the next most frequent category (25 percent) was zero dollars. As one director stated, "We must be sure that each continuing education program pays all the expenses, i.e., self-contained. We do not have outside resources." Two organizations declined to state the amount budgeted for nursing continuing education. Table 43 displays these data.

Table 42

Table Displaying the Frequency and Percent of Directors and the Degree of Importance of each Area of Satisfaction

		Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
Low Security	2	1	3.6	3.6
	3	3	10.7	14.3
	4	12	42.9	57.2
High	5	12	42.9	100.0
Low Social	2	1	3.6	3.6
	3	6	21.4	25.0
	4	14	50.0	75.0
High	5	7	25.0	100.0
Low Esteem	2	6	21.4	21.4
	3	8	28.5	49.9
	4	12	42.9	92.9
High	5	2	7.1	100.0
Low Autonomy	2	1	3.6	3.6
	3	5	17.8	21.4
	4	15	53.6	75.0
High	5	7	25.0	100.0
Low Self-Realization	2	1	3.6	3.6
	3	3	10.7	14.3
	4	14	50.0	64.3
High	5	10	35.7	100.0

Table 43

Table Displaying Number and Percent of Organizations for the Number of Personnel in that Organization

PART A Personnel	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
No full-time	5	17.9	17.9
1-2	19	69.9	85.7
3-4	4	14.3	100.0
Total	28	100.0%	

Table Displaying the Number and Percent of Organizations and the Level of Budget Allocated for Nursing Continuing Education

PART B Budget (in Dollars)	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
0	7	25.0	25.0
0-5,000	3	10.7	35.7
6-10,000	3	10.7	46.4
11-15,000	1	3.6	50.0
16-20,000	1	3.6	53.6
> 20,000	11	39.3	92.9
No Response	2	7.1	100.0
Total	28	100.0%	

Span of control. The span of control was measured by the researcher by completing a skeleton organization chart using information as given by each director. The number of subordinates were counted and recorded. The higher the number the larger the span of control of the director of continuing education. Most directors (42.9 percent) had a span of control over two people. Table 44 displays these data.

Table 44

Table Displaying Frequency and Percent of Directors of CE Organizations and the Degree of Span of Control Within the Organization

Total Numbers	Absolute Frequency	Relative Frequency (PCT)	Cumulative Frequency (PCT)
1	1	3.6	3.6
2	12	42.9	46.4
3	5	17.9	64.3
4	5	17.9	82.1
5	1	3.6	85.7
6	3	10.7	96.4
9	1	3.6	100.0
Total	28	100.0%	

Data which describe organizations by type. As identified in Chapter 3, there was a total of 115 organizations approved by the Iowa Board of Nursing (as of June 26,

1980) to provide nursing continuing education in the state of Iowa. The nurse respondents identified seventy-one of these providers as providing a program they deemed valuable. These seventy-one organizations fit, by this researcher's definition, into eleven different categories. These categories are:

Hospital
Community College
Clinic
Voc-Tech College
University
Private College
Consultant's Group
Professional Association
Continuing Education Association
Long-Term Care
School of Nursing - Diploma

Each of the components of organizations just described in the preceding pages was then analyzed in terms of these eleven different types of organizations which had been identified by the nurse respondents in Phase I of this study. These components are again listed in alphabetical order to assist the reader.

Administrative Staff. Table 45 displays the number and percent of responses for each option designating numbers of administrative staff for each type of organization. Vocational-technical schools, universities and private colleges provided the most administrative staff while clinics and hospitals provided the least amount.

An analysis of variance (ANOVA) was done to see if there were any differences between groups and within groups.

Table 45

Table Displaying the Number and Percent for each Option of Administrative Staff for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N = 9				Community Colleges N = 5				Clinics N = 1				Vocational-Technical N = 2			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Administrative Staff	0																
	Part Time	6	66.7							1	100						
	Full Time 1-2	3	33.3	2.33	.50	2	40	3.8	.83			2	0			4.0	0
	3-5					2	40							2	100		
	6-8																
	9-11																

Variable		Universities N=2				Private Colleges N=1				Consultants Group N = 1				Professional Associations N = 4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Administrative Staff	0													1	25		
	Part Time					1	50			1	100						
	Full Time 1-2													2	50		
	3-5	2	100	3	1.42	1	50	3	0			2	0			3.25	2.06
	6-8																
	9-11													1	50		

Table 45 (Continued)

Variable		Cont. Education Association N = 1				Long-Term Care N=1				School of Nursing Diploma N = 1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Administrative Staff	0			3	0							2	0
	Part Time									1	100		
	Full Time 1-2	1	100			1	100	3	0				
	3-5												
	6-8												
	9-11												

Table 46 displays these data.

The between-group score was 1.2307 and within-group score was 1.1509. For a total of 27 degrees of freedom, the F score was 1.0702. ETA squared was .3863. The researcher, based on these data, would fail to reject the hypothesis of no difference for administrative staff scores among and within groups. The ETA squared statistic is derived from F and is closer to a Pearson's Correlation with positive or negative correlations lying between a plus one and a negative one. ETA is a measure of association used when the independent variable is nominal level and the dependent variable is interval or ratio level. It is basically an indication of how dissimilar the means on the dependent variable are within the categories of the independent variable. When the means are identical, ETA is zero. If the means are very different and the variances within the categories of the independent variable are small, ETA increases toward a maximum value of one. The ETA squared score for administrative staff was close to zero which implies no correlation. These data are displayed in Table 46.

Table 46

Table Displaying ANOVA for Between Groups and Within Groups for the Variable - Administrative Staff

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	12.3071	10	1.2307
Within Groups	19.5500	17	1.1509
Total	31.8571	27	

F = 1.0702; Sig. = .4334; ETA Sqrd. = .3863

Autonomy. Table 47 displays the number, percent, mean and standard deviation for the autonomy found in the eleven different organizations. Hospitals demonstrated a wide range with almost half below the mean and half above the mean. Continuing education organizations demonstrated the highest autonomy.

An analysis of variance (ANOVA) was done. The between-group score is 20.8252,and the within-group score was 8.9327. For a total of 27 degrees of freedom the F score was 2.3313,which was significant at the .059 level. Based on these data the researcher would accept the hypothesis of no difference. Further an ETA squared score was computed. The ETA score was .5783. These data are displayed in Table 48.

Table 47

Table Displaying the Number and Percent of Each Option for the Variable Autonomy for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospital N=9				Community Colleges N=5				Clinics N=1				Vocational Technical N=2			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Autonomy	Low 2	1	11.1	7.77	3.59			7.20	1.30			13.0	0			5.5	.70
	5	1	11.1							1	50						
	6	1	11.1			2	40.0			1	50						
	7	2	22.2			1	20.0										
	8	1	11.1			1	20.0										
	9	1	11.1			1	20.0										
	11																
	12	1	11.1														
	13									1	100						
	14	1	11.1														
	16																
	High 18																

Variable		Universities N=2				Private Colleges N=1				Consultants Groups N=1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Autonomy	Low 2																
	5																
	6													1	25		
	7													1	25		
	8					1	100										
	9	2	100					8.0	0			18.0	0			9.5	3.69
	11													1	25		
	12																
	13																
	14													1	25		
	16																
	High 18									1	100						

Table 47 (Continued)

Variable		Continuing Education N = 1				Long-Term Care N-1				Diploma School of Nursing N = 1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
	Low 2												
	5												
	6									1	100		
	7												
	8												
	9			16.0	0	1	100	9.0	0			6.0	0
Autonomy	11												
	12												
	13												
	14												
	16	1	100										
	High 18												

Table 48

Table Displaying ANOVA for Between Groups and Within Groups for the Variable - Autonomy

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	208.2516	10	20.8252
Within Groups	151.8556	17	8.9327
Total	360.1071	27	

F = 2.3313; Sig. = .059; ETA Sqrd. = .5783

Centralization. Table 49 displays the number, percent, mean and standard deviation for the degree of centralization. Hospitals, clinics, universities and professional organizations showed a high level of centralization. Consultant groups and community colleges had lower levels of centralization. An ANOVA was done. The between group score was 20.8252 and the within group score was 8.9327. For a total of 27 degrees of freedom, the F score was 2.3313, which was significant at the .059 level. The ETA score was .5783. Based on these data, the researcher would accept the hypothesis of no difference. These data are displayed in Table 50.

Table 49

Table Displaying the Number and Percent of each Option for the Variable Centralization for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospital N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N = 2			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
	High 1	8	88.9							1	100						
	2					3	60.0							2	100		
Centralization	3	1	11.1	1.22	.66	1	20.0	2,6	.89			1.0	0			2.0	0
	4					1	20.0										
	Low 5																

Variable		Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
	High 1	2	100											1	25		
	2					1	100	2.0	0			4.0	0	3	75		
Centralization	3			1.0	0											1.75	.50
	4									1	100						
	Low 5																

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
	High 1	1	100			1	100						
	2												
Centralization	3			1.0	0			1.0	0			5.0	0
	4												
	Low 5									1	100		

Table 50

Table Displaying ANOVA for Between Groups and Within Groups for the Variable - Centralization

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	24.6016	10	2.4602
Within Groups	7.5056	17	.4415
Total	32.1071	27	

F = 5.5722; Sig. = .0010; ETA Sqrd. = .7662

Communication. Adequacy of communication was first analyzed. Table 51 displays these data. Most organization directors perceived that the communication with their superiors was adequate. Clinic directors indicated some uncertainty in this area.

An ANOVA was done. The between group score was .5352 and the within group score was .4415. For a total of 27 degrees of freedom, the F score was 1.2121. ETA score was .4162. Based on these data, the researcher would fail to reject the hypothesis of no difference. These data are displayed in Table 52.

Table 51

Table Displaying the Number and Percent of each Option for the Variable Adequacy of Communication for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospital N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Adequacy of Communication	Appropriate	4	44.4			3	60							2	100		
	Often Appropriate	3	33.3	1.77	.83	2	40	1.4	.54			3.0	0			1.0	0
	Uncertain	2	22.2							1	100						

Variable		Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Adequacy of Communication	Appropriate	2	100			1	100			1	100			3	75		
	Often Appropriate			1.0	0			1.0	0			1.0	0	1	25	1.25	.50
	Uncertain																

Variable		Continuing Education N=1				Long-Term Care N=2				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Adequacy of Communication	Appropriate	1	100			1	100			1	100		
	Often Appropriate			1.0	0			1.0	0			1.0	0
	Uncertain												

Table 52

Table Displaying ANOVA for Between and Within Groups for the Variable Adequacy of Communication

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	5.3516	10	.5253
Within Groups	7.5056	17	.4415
Total	12.8571	27	

F = 1.2121; Sig. = .3495; ETA Sqrd. = .4162

Communication. Amount of Time spent in communicating with immediate superiors in the different types of organizations was analyzed. The number of responses, mean and standard deviation, are displayed in Table 53. Consultant groups, professional organizations and diploma school directors spent less time talking with superiors than did the clinic group,which spent much more time. An ANOVA was done. The between group score was 2.9664 and the within group score was 1.6059. For a total of 27 degrees of freedom, the F score was 1.8472. This was significant at the .1275 level. The ETA score was .5208. Based on these data, the researcher would fail to reject the hypothesis of no difference. These data are displayed in Table 54.

Table 53

Table Displaying the Number and Percent of each Option for the Variable Amount of Time Spent in Communication for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
Communication		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Amount of Time	≤ 1/4																
	1/4-1/2	1	11.1	3.33	.70	1	20.0	3.80	1.09			6.0	0			5.0	0
	1/2-1	4	44.4														
	1-2	4	44.4			3	60.0										
	2-4					1	20.0							2	100		
	>4									1	100						

Variable		Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Associations N=4			
Communication		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
	≤ 1/4									1	100			2	50		
	1/4-1/2																
Amount of Time	1/2-1	1	50	4.5	.70	1	100	3.0	0			1.0	0			3.0	2.44
	1-2	1	50											1	25		
	2-4																
	>4													1	25		

Variable		Continuing Education N=1				Long-Term N=1				School of Nursing Diploma N=1			
Communication		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
	1/4									1	100		
	1/4-1/2												
Amount of Time	1/2-1			5.0	0	1	100	3.0	0			1.0	0
	1-2												
	2-4	1	100										
	4												

Table 54

Table Displaying ANOVA for Between and Within Groups for the Variable - Amount of Time Spent in Communication

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	29.6643	10	2.9664
Within Groups	27.3000	17	1.6059
Total	56.9643	27	

F = 1.8472; Sig. = .1275; ETA Sqrd. = .5208

Communication. Appreciation expressed by the supervisor for the work of the director was indicated as "often" or "always" by all organizations except clinics and diploma schools. Table 55 displays number, percent, mean and standard deviation for these data.

An ANOVA was done. The between-group score was .3792 and the within-group score was .4660. For a total of 27 degrees of freedom, the F score was .8137, which was significant only at the .6203 level. The ETA score was .3237. Based on these data, the researcher would fail to reject the hypothesis of no difference. These data are displayed in Table 56.

Table 55

Table Displaying the Number and Percent of each Option for the Variable - Expressed Appreciation in Communication for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Expressed Appreciation	Always	1	11.1											1	50.0		
	Often	3	33.3	2.44	.726	2	40.0	2.60	.547			3.0	0	1	50.0	1.50	.707
	Sometimes	5	55.6			3	60.0			1	100						

Variable		Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Expressed Appreciation	Always													1	25		
	Often	2	100	2.0	0	1	100	2.0	0	1	100	2.0	0	2	50	2.0	.816
	Sometimes													1	25		

Variable		Continuing Education N=1				Long-Term N = 1				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Expressed Appreciation	Always												
	Often	1	100	2.0	0	1	100	2.0	0			3.0	0
	Sometimes									1	100		

Table 56

Table Displaying ANOVA for Between and Within Groups for the Variable Expressed Appreciation in Communication

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	3.7921	10	.3792
Within Groups	7.9222	17	.4660
Total	11.7143	27	

F = .8137; Sig. = .6203; ETA Sqrd. = .3237

Communication. Formal communication scores for each organization are displayed in Table 57. The number, percent, mean and standard deviation are shown for the values given for each organization. The lower the score, the more supportive the formal communication was with superiors. Clinics and continuing education organizations have more supportive formal communication. Private colleges, consultant groups, long-term care and diploma school organizations showed less supportive formal communication.

An ANOVA was done. The between-groups score was .1557 and the within-group score was .2676. For a total of 27 degrees of freedom, the F score was .5818, which was significant only at the .8072 level. The ETA score was .2550. Based on these data, the researcher would fail to reject the hypothesis of no difference. These data are displayed in Table 58.

Table 57

Table Displaying the Number and Percent of each Option for the Variable - Formal Communication for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable	Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
More Supportive	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Formal 2	3	33.3			1	20.0			1	100			1	50		
Communication			2,66	.50			2.80	.447			2.0	0	1.50		2.5	.707
3 Less Supportive	6	66.7			4	80.0										

Variable	Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Associations N=4			
More supportive	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Formal 2	1	50											1	25		
Communication			2.5	.707												
3 Less supportive	1	50			1	100	3.0	0	1	100	3.0	0	3	75	2.75	.50

Variable	Continuing Education N=1				Long-Term N=1				School of Nursing Diploma N=1			
More supportive	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Formal 2	1	100	2.0	0								
Communication							3.0	0			3.0	0
3 Less supportive					1	100			1	100		

Table 58

Table Displaying ANOVA for Between and Within Groups for the Variable Formal Communication

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	1.5571	10	.1557
Within Groups	4.5500	17	.2676
Total	6.1071	27	

F = .5818; Sig. = .8072; ETA Sqrd. = .2550

Informal Communication. Amount of time spent in informal communication by the directors of the different types of organizations is displayed in Table 59. The number, percent, mean and standard deviation are given for each organization. All organizations showed a wide range of time spent by the directors in informal communication. The most time spent in informal communication was indicated by the clinic organization.

Table 60 displays the ANOVA data. The between-group score was 2.1307 and the within-group score was 3.3853. For a total of 27 degrees of freedom, the F score was .6294, which was significant only at the .7698 level. The ETA score was .2702. Based on these data, the researcher would fail to reject the hypothesis of no difference.

Table 59

Table Displaying the Number and Percent of each Option for the Variable - Amount of Time Spent in Informal Communication for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
	Hours	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Informal Communication	< 1/4	1	11.1														
	1/4-1/2	3	33.3			1	20.0							1	50.0		
	1/2-1	1	11.1	3.0	1.32	1	20.0	4.2	1.78	1	100	3.0	0			4.0	2.82
Amount of Time	1-2	3	33.3			1	20.0										
	2-4	1	11.1														
	> 4					2	40.0							1	50.0		

Variable		Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Associations N=4			
	Hours	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
	1/4													1	25		
Amount of Time	1/4-1/2	1	50							1	100			1	25		
	1/2-1			4.0	2.82	1	100	3.0	0			2.0	0			3.2	2.21
	1-2													1	25		
	2-4																
	4	1	50											1	25		

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
	1/4	1	100										
Amount of Time	1/4-1/2												
	1/2-1			1.0	0			6.0	0			4.0	0
	1-2									1	100		
	2-4												
	4					1	100						

Table 60

Table Displaying ANOVA for Between and Within Groups for the Variable - Amount of Time Spent in Informal Communications

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	21.3071	10	2.1307
Within Groups	57.5500	17	3.3853
Total	78.8571	27	

F = .6294; Sig. = .7698; ETA Sqrd. = .2702

Informal Communication. The position in the organization with whom the director spoke informally was most often in a lower position. Professional organizations were the only organizational group which identified that informal communication was with someone in a higher position. Table 61 displays these data.

An ANOVA treatment was done. The between-group score was .3042 and the within-group score was .7013. For a total of 27 degrees of freedom, the F score was .4338, which was significant only at the .9096 level. The ETA score was .2033. Based on these data, the researcher would fail to reject the hypothesis of no difference. These data are displayed in Table 62.

Table 61

Table Displaying the Number and Percent of each Option for the Variable - Position in Organization for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
Informal Communication		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Position in Organization	Lower	4	44.4			3	60.0			1	100			1	50.0		
	Same	5	55.6	1.55	.527	1	20.0	1.60	.894			1.0	0	1	50.0	1.50	.707
	Immed. Sup.					1	20.0										
	Higher																

Variable		Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Organizations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Position in Organization	Lower	2	100							1	100			2	50		
	Same			1.0	0	1	100	2.0	0			1.0	0	1	25	2.0	1.41
	Immed. Sup.																
	Higher													1	25		

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Position in Organization	Lower					1	100			1	100		
	Same	1	100	2.0	0			1.0	0			1.0	0
	Immed. Sup.												
	Higher												

Table 62

Table Displaying ANOVA for Between and Within Groups for the Variable - Position in Organization - Informal Communication

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	3.0421	10	.3042
Within Groups	11.9222	17	.7013
Total	14.9643	27	

F = .4338; Sig. = .9096; ETA Sqrd. = .2033

Communication. Ways that continuing education can be improved were discussed by all the different organizations. Table 63 displays the number, percent, mean and standard deviation for the various time options. Community colleges, universities, some hospitals (2) and continuing education organization directors indicated that how to improve continuing education was discussed several times a week. Some directors (private college, consultants, hospitals (2), professional organizations (2)) indicated this was only discussed once a month.

An ANOVA was done. The between-group score was 1.5935 and the within-group score was 1.8190. For a total of 27 degrees of freedom, the F score was .8760,which was significant only at the .5713 level. The ETA score was .3401. Based on these data, the researcher would fail to

Table 63

Table Displaying the Number and Percent of each Option for the Variable - Ways that Continuing Education can be Improved for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
Informal Communication		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Frequency Ways Cont. Ed. Can be Improved	Once a Month	2	22.2	2.55	1.13	2	40										
	2-3 X Month	2	22.2			1	20										
	Once a Week	3	33.3			1	20			1	100	3.0	0			4.0	0
	Several X a Week	2	22.2											2	100		
	Once a day or more					1	20										

Variable		Universities N=2				Private Colleges N=1				Consultants Groups N=1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Ways Cont. Ed. Can be Improved	Once a Month					1	100			1	100			2	50		
	2-3 X Month																
	Once a Week	1	50	3.50	.707			1.0	0			1.0	0			2.50	1.73
	Several X a Week	1	50											2	50		
	Once a day or more																

Table 63 (Continued)

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Frequency													
Ways Cont. Ed. Can Be Improved	Once a Month									1	100		
	2-3 X Month					1	100						
	Once a Week			4.0	0			2.0	0			1.0	0
	Several X A Week	1	100										
	Once a Day or more												

reject the hypothesis of no difference. These data are displayed in Table 64.

Table 64

Table Displaying the ANOVA for Between and Within Groups for the Variable - Ways that Continuing Education can be Improved

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	15.9349	10	1.5935
Within Groups	30.9222	17	1.8190
Total	46.8571	27	

F = .8760; Sig. = .5713; ETA Sqrd. = .3401

Communication. Ways to improve coordination was discussed by the directors of all the organizations. Some hospitals (2), community colleges (2), vocational-technical college (1), professional organization (1), continuing education (1) directors discussed ways coordination could be improved several times a week. Some organizations: hospitals (3), community colleges (1), vocational-technical schools (1), professional organizations (2), long-term care (1), and diploma schools of nursing (1) only discussed ways to improve coordination once a month. Table 65 displays these data.

The ANOVA data are displayed in Table 66. The between-group score is .7157 and the within-group score was

Table 65

Table Displaying the Number and Percent of each Option for the Variable - Ways to Improve Coordination for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
Informal Communication		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Frequency	Once a Month	3	33.3			1	20							1	50		
Ways to Improve Coordination	2-3 X a month	2	22.2			2	40			1	100						
	Once a Week	2	22.2	2.33	1.22			2.60	1.34			2.0	0			2.50	2.12
	Several X A Week	2	22.2			2	40							1	50		
	Once a day or more																

Variable		Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Associations N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Ways to Improve Coordination	Once a Month													2	50		
	2-3 x a month	1	50			1	100			1	100						
	Once a Week	1	50	2.50	.707			2.0	0			2.0	0	1	25	2.25	1.50
	Several X a Wk.													1	25		
	Once a day or more																

Table 65 (Continued)

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
Informal Communication		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Frequency Ways to Improve Coordination	Once a Month					1	100			1	100		
	2-3 X a Month												
	Once a Week			4.0	0			1.0	0			1.0	0
	Several X a Week	1	100										
	Once a day or more												

1.8206. For a total of 27 degrees of freedom, the F score was .3931, which was significant only at the .9321 level. The ETA score was .1878. Based on these data the researcher would fail to reject the hypothesis of no difference.

Table 66

Table Displaying the ANOVA for Between and Within Groups for the Variable - Ways to Improve Coordination

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	7.1571	10	.7157
Within Groups	30.9500	17	1.8206
Total	38.1071	27	

F = .3931; Sig. = 9321; ETA Sqrd. = .1878

Communication. Informal communication concerning employee wages and benefits was a subject that nearly all directors of nursing continuing education did not discuss very frequently. One explanation may be that over half of the directors talked informally (Table 61) with people in a lower or in the same position. Table 67 displays these data.

The ANOVA data are displayed in Table 68. The between-group score was .0607 and the within-group score was .0735. For a total of 27 degrees of freedom, the F score was .8257, which is significant only at the .6107 level. The

Table 67

Table Displaying the Number and Percent of each Option for the Variable - Ways to Improve Working Relations for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
	Frequency	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Employee Wages and Benefits	Once a Month	9	100			5	100			1	100	1.00	0	1	50	1.50	.707
	2-3 Times a Month			1.00	0			1.00	0					1	50		

Variable		Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Employee Wages and Benefits	Once a Month	2	100	2.0	0	1	100	1.0	0	1	100	1.00	0	3	75	1.25	.50
	2-3 Times a Month			2.0	0									1	25		

Variable		Continuing Education N=4				Long-Term Care N=1				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Employee Wages and Benefits	Once a Month	1	100	1.00	0	1	100	1.00	0	1	100	1.00	0
	2-3 X a Month												

ETA score was .3269. Based on these data, the researcher would fail to reject the hypothesis of no difference.

Table 68

Table Displaying the ANOVA for Between and Within Groups for the Variable - Employee Wages and Benefits

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	.6071	10	.0607
Within Groups	1.2500	17	.0735
Total	1.8571	27	

F = .8257; Sig. = .6107; ETA Sqrd. = .3269

Communication. Informal communication concerning the ways to improve working relations within the organization was analyzed. These data are displayed in Table 69. Only seven organizations: hospitals (4), professional organizations (2) and diploma school (1), discussed this on at least a weekly basis. All other organizations in this study discussed this on a monthly basis.

An ANOVA was carried out and is displayed in Table 70. The between-group score was .9450 and the within-group score was 1.0471. For a total of 27 degrees of freedom, the F score was .9025,which was significant at the .5511 level. The ETA score was .3468. Based on these data, the researcher would fail to reject the hypothesis of no difference.

Table 69

Table Displaying the Number and Percent of each Option for the Variable - Ways to Improve Working Relations for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable	Frequency	Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
Informal Communication		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Improve Working Relations	Once a Month	3	33.3	2.33	1.22	4	80	1.20	.447	1	100	1.00	0	1	50	1.50	.707
	2-3 X Month	2	22.2			1	20										
	Once a Week	2	22.2														
	Several X a Week	2	22.2														

Variable		Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Associations N=4			
Informal Communication		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Improve Working Relations	Once a Month	1	50	1.50	.707	1	100	1.00	0	1	100	1.00	1	2	50	2.00	1.154
	2-3 X Month	1	50														
	Once a Week													2	50		
	Several X a Week																

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
Informal Communication		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Improve Working Relations	Once a Month	1	100	1.00	0	1	100	1.00	0			3.00	0
	2-3 X Month												
	Once a Week									1	100		
	Several X a Week												

Table 70

Table Displaying the ANOVA for Between and Within Groups for the Variable - Ways to Improve Working Relations

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	9.4500	10	.9450
Within Groups	17.8000	17	1.0471
Total	27.2500	27	

F = .9025; Sig. = .5511; ETA Sqrd. = .3468

Communication. Informal communication about ways to improve staff morale. One-half of the hospital organizations (5), one community college and one professional organization discussed this on a weekly basis while most of the organizations (21) discussed this only on a monthly basis. Table 71 displays these data.

Table 72 displays the ANOVA data. The between-group score was 1.4959 and the within-group score was .6915. For a total of 27 degrees of freedom,the F score was 2.1632, which was significant only at the .0776 level. The ETA score was .5600. Based on these data, the researcher would fail to reject the hypothesis of no difference.

Table 71

Table Displaying the Number and Percent of each Option for the Variable - Ways to Improve Staff Morale for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable	Frequency	Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Ways to Improve Staff Morale	Once a Month					3	60.0			1	100			2	100		
	2-3 X a month	4	44.4	2.77	.83	1	20.0	1.60	.894			1.00	.00			1.00	0
	Once a Week	3	33.3			1	20.0										
	Several X a week	2	22.2														

Variable		Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Ways to Improve Staff Morale	Once a Month	2	100			1	100			1	100			3	75		
	2-3 X Month			1.00	0			1.00	0			1.00	0			1.50	1.00
	Once a Week													1	25		
	Several X a week																

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Ways to Improve Staff Morale	Once a Month	1	100			1	100						
	2-3 X Month			1.00	0			1.00	0	1	100	2.00	0
	Once a Week												
	Several X a week												

Table 72

Table Displaying the ANOVA for Between and Within Groups for the Variable - Ways to Improve Staff Morale

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	14.9587	10	1.4959
Within Groups	11.7556	17	.6915
Total	26.7143	27	

F = 2.1632; Sig. = .0776; ETA Sqrd. = .5600

Communication. Informal communication concerning things and happenings outside of the organization was analyzed. Eighteen of the organizations which included: hospitals, community colleges, clinics, vocational-technical schools, universities, consultant groups, professional organizations, continuing education groups, long-term care discussed informally things and happenings outside of the organization at least on a weekly basis. Ten of the organizations, according to the directors, discussed such informal topics only on a monthly basis. Table 73 displays these data.

An ANOVA was carried out and Table 74 displays these data. The between-group score was 2.0756 and the within-group score was 2.3484. For a total of 27 degrees of freedom, the F score was .8839, which was significant only at the .5653 level. The ETA score was .3421. Based on these data,

Table 73

Table Displaying the Number and Percent of each Option for the Variable - Informal Communication about Things and Happenings Outside of the Organization for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable	Frequency	Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
Informal Communication		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Things & Happenings Outside of Organization	Once a Month	1	11.1	3.55	1.42	1	20	2.60	1.51			3.0	0	1	50	2.50	2.12
	2-3 X Month	1	11.1			2	40										
	Once a Week	2	22.2			1	20			1	100						
	Several X a Week	2	22.2											1	50		
	Once a Day	3	33.3			1	20										

Variable.		Universities N=2				Private Colleges N=1				Consultants Groups N=1				Professional Associations N=4			
Informal Communication		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
	Once a Month			3.0	0	1	100	1.0	0			5.0	0	1	25	3.00	1.82
	2-3 X a Month													1	25		
	Once a Week	2	100														
	Several X a Week													1	25		
	Once a Day									1	100			1	25		

Table 73 (Continued)

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
Informal Communication		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
	Once a Month									1	100		
	2-3 X a Month												
Things & Happenings Outside of Organization	Once a Week			4.0	0			5.0	0			1.0	0
	Several X a Week	1	25										
	Once a Day					1	100						

the researcher would fail to reject the hypothesis of no difference.

Table 74

Table Displaying the ANOVA for Between and Within Groups for the Variable - Informal Communication About Things and Happenings Outside the Organization

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	20.7563	10	2.0756
Within Groups	39.9222	17	2.3484
Total	60.6786	27	

F = .8839; Sig. = .5653; ETA Sqrd. = .3421

Coordination. Coordination within the nursing continuing education organization was analyzed. Only one community college organization was uncertain if coordination occurred. All other organizations either agreed (15) or strongly agreed (12) that coordination occurred. Table 75 displays these data.

An ANOVA was carried out. Table 76 displays these data. The between-group score was .2879 and the within-group score was .3412. For a total of 27 degrees of freedom, the F score was .8437, which was significant only at the .5965 level. The ETA score was .3317. Based on these data, the researcher would fail to reject the hypothesis of no difference.

Table 75

Table Displaying the Number and the Percent of each Option for the Variable - Coordination for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable	Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
Coordination Occurs	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Strongly Agree	3	33.3			2	40.0										
Agree	6	66.7			2	40.0			1	100			2	100		
Uncertain			1.66	.50	1	20.0	1.80	.836			2.0	0			2.0	0

Variable	Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Associations N=4			
Coordination Occurs	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Strongly Agree	2	100							1	100			2	50		
Agree			1.0	0	1	100	2.0	0			1.0	0			1.50	.577
Uncertain																

Variable	Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
Coordination Occurs	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Strongly Agree	1	100			1	100						
Agree			1.0	0			1.0	0	1	100	2.0	0
Uncertain												

Table 76

Table Displaying the ANOVA for Between and Within Groups for the Variable - Coordination

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	2.8786	10	.2879
Within Groups	5.8000	17	.3412
Total	8.6786	27	

F = .8437; Sig. = .5965; ETA Sqrd. = .3317

Reliability. In response to achieving a singleness of purpose and/or coordination of the department of nursing continuing education to fulfill its mission, the directors responded to what Price called reliability. All organizations' directors saw this always or often occurring. Table 77 displays these data.

An ANOVA was done and these data are displayed in Table 78. The between-group score was .3573 and the within-group score was .1827. For a total of 27 degrees of freedom, the F score was 1.9559, which was significant only at the .1074 level. The ETA score was .5350. Based on these data, the researcher would fail to reject the hypothesis of no difference.

Table 77

Table Displaying the Number and Percent of each Option for the Variable - Reliability, for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Reliability	Always	2	2.22	1.777	.441	1	20.0	1.80	.447			2.0	0	2	100	1.0	0
	Often	7	77.8			4	80.0			1	100						

Variable		Universities N=2				Private Colleges N=1				Consultants Group N-1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Reliability	Always									1	100			3	75.0		
	Often	2	100	2.0	0	1	100	2.0	0			1.0	0	1	25.0	1.25	.500

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Reliability	Always	1	100			1	100						
	Often			1.0	0			1.0	0	1	100	2.0	0

Table 78

Table Displaying the ANOVA for Between and Within Groups for the Variable - Reliability

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	3.5730	10	.3573
Within Groups	3.1056	17	.1827
Total	6.6786	27	

F = 1.9559; Sig. = .1074; ETA Sqrd. = .5350

Dispersion. Almost all of the organizations (21) were at one site. Community colleges (1), vocational-technical (1), consultant groups (1), professional organizations (3) and continuing education (1) had some degree of dispersion. Table 79 displays these data.

An ANOVA was done. Table 80 displays these data. The between-group score was .8907 and the within-group score was .5853. For a total of 27 degrees of freedom, the F score was 1.5218, which was significant only at the .2145 level. The ETA score was .4723. Based on these data, the researcher would fail to reject the hypothesis of no difference.

Table 79

Table Displaying the Number and Percent of each Option for the Variable - Dispersion for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Dispersion	All at 1 site	9	100			4	80.0			1	100			1	50		
	Less than 25% at one site			1.0	0			1.40	.894			1.0	0			2.0	1.414
	More than 50% at one site					1	20							1	50		
	More than 75% at one site																

Variable		Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Dispersion	All at 1 site	2	100			1	100							1	25		
	Less than 25% at one site													2	50		
	More than 50% at one site			1.0	0			1.0	0	1	100	3.0	0			2.25	1.258
	More than 75% at one site													1	25		

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Dispersion	All at 1 site					1	100			1	100		
	Less than 25% at one site	1	100	2.0	0			1.0	0			1.0	0
	More than 50% at one site												
	More than 75% at one site												

Table 80

Table Displaying the ANOVA for Between and Within Groups for the Variable - Dispersion

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	8.9071	10	.8907
Within Groups	9.9500	17	.5853
Total	18.8571	27	

F = 1.5218; Sig. = .2145; ETA Sqrd. = .4723

Effectiveness. The effectiveness of the organizations in terms of its work was analyzed. This analysis looked at the average number of participants in each program, length of program, and the average number of programs annually.

Average number of participants at each program. Only one organization (clinics) had over 200 participants as an average number at its workshops. One professional organization indicated that there were between 151-200 participants on an average at workshops. All of the other organizations indicated 1-100 average number of participants at workshops. Table 81 displays these data.

Average number of participants-ANOVA. The between-group score was 1.6418 and the within-group score was 1.1435. For a total of 27 degrees of freedom, the F score was 1.4358, which is significant only at the .2460 level. The ETA score

Table 81

Table Displaying the Number and the Percent of each Option for the Variable - Effectiveness - Average Number of Participants at each Program, for each Type of Organization with the Mean (M) and the Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Effectiveness Average # of Participants at each Program	1-50	2	22.2	2.11	1.166	4	80.0	1.20	.4472			5.0	0	1	50	1.50	.7071
	51-100	6	66.7			1	20.0							1	50		
	101-150																
	151-200																
	> 200	1	11.1							1	100						

Variable		Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Effectiveness - Average # of Participants at Each Program	1-50	1	50	1.50	.7071			3.0	0			2.0	0	2	50	2.25	1.50
	51-100	1	50							1	100						
	101-150													1	25		
	151-200													1	25		
	> 200																

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing - Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Effectiveness - Average # of Participants at Each Program	1-50			2.0	0	1	100	1.0	0	1	100	1.0	0
	51-100	1	100										
	101-150												
	151-200												
	> 200												

was .4579. Based on these data, the researcher would fail to reject the hypothesis of no difference. These data are displayed in Table 82.

Table 82

Table Displaying the ANOVA for Between and Within Groups for the Variable - Effectiveness - Average Number of Participants at each Program

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	16.4183	10	1.6418
Within Groups	19.4389	17	1.1435
Total	35.8571	27	

F = 1.4358; Sig. = .2460; ETA Sqrd. = .4579

Length of Program. Most organizations: hospitals (6), community colleges (2), vocational-technical (1), universities (2), private colleges (1), consultants (1), professional organizations (3), continuing education (1), long-term care (1) and diploma schools (1) have programs which are 1-2 days in length.

Only two community colleges indicated that their programs were over four days in length. Table 83 displays these data.

Length of Program-ANOVA. The between-group score was .4229 and the within-group score was .6147. For a total of 27 degrees of freedom, the F score was .6879, which is

Table 83

Table Displaying the Number and Percent of each Option for the Variable - Effectiveness - Average Length of Program, for each Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Length of Program	≤ 1/2 day	3	33.3			1	20.0			1	100			1	50		
	1-2 days	6	66.7			2	40.0							1	50		
	> 4 days			1.666	.500	2	40.0	2.60	1.34			1.0	0			1.50	.7071

Variable		Universities N=2				Private Collages N=1				Consultant Group N=1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Length of Program	1/2 day													1	25		
	1-2 days	2	100			1	100			1	100			3	75		
	≤ 4 days			2.0	0			2.0	0			2.0	0			1.75	.500

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Length of Program	1/2 day												
	1-2 days	1	100	2.0	0	1	100	1.0	0	1	100	1.0	0
	4 days												

significant at the .7225 level. The ETA score was .2881. The researcher, based on these data, would fail to reject the hypothesis of no difference. These data are displayed in Table 84.

Table 84

Table Displaying the ANOVA for Between and Within Groups for the Variable - Effectiveness - Average Length of Program

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	4.2286	10	.4229
Within Groups	10.4500	17	.6147
Total	14.6786	27	

F = .6879; Sig. = .7225; ETA Sqrd. = .2881

Average number of programs annually. Thirteen of the organizations including hospitals (3), community colleges (5), vocational-technical (2), universities (1), professional organizations (1) and diploma schools (1) offer over twenty programs annually. These data are displayed in Table 85.

Average number of programs annually-ANOVA. The between-groups score was 4.7456 and the within-group was 2.2925. For a total of 27 degrees of freedom, the F score was 2.0701, which was significant only at the .0897 level. The ETA score was .5491. Based on these data, the researcher

Table 85

Table Displaying the Number and Percent of each Option for the Variable - Effectiveness - Average Number of Programs Annually for each Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Average Number of Programs Annually	1-5	1	11.1														
	6-10	2	22.2							1	100						
	11-15	1	11.1	3.44	1.50			5.0	0			2.0	0			5.0	0
	16-20	2	22.2														
	> 20	3	33.3			5	100							2	100		

Variable		Universities N=2				Private Colleges N=2				Consultants Group N=1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Average Number of Programs Annually	1-5	1	50			1	100			1	100			2	50		
	6-10																
	11-15			3.0	2.82			1.0	0			1.0	0			2.75	2.06
	16-20													1	25		
	> 20	1	50											1	25		

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Average Number of Programs Annually	1-5	1	100			1	100						
	6-10												
	11-15			1.0	0			1.0	0			5.0	0
	16-20												
	> 20									1	100		

would fail to reject the hypothesis of no difference. These data are displayed in Table 86.

Table 86

Table Displaying the ANOVA for Between and Within Groups for the Variable - Effectiveness - Average Number of Programs Annually

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	47.456	10	4.7456
Within Groups	38.9722	17	2.2925
Total	86.4286	27	

F = 2.0701; Sig. = .0897; ETA Sqrd. = .5491

Formalization. There was a high degree of formalization in hospitals (9), community colleges (3), clinics (1), vocational-technical (1), professional organizations (2), and long-term care (1). There was a low degree of formalization in two of community colleges, one of the vocational-technical schools, two of the universities, one private college, one consultant group, two of the professional organizations, one continuing education group and one diploma school. These data are displayed in Table 87.

Written Documents

The number of written documents in the form of job descriptions, policy and procedure manuals was a further

Table 87

Table Displaying the Number and Percent of each Option for the Variable - Formalization, for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
Mean Value		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
High	1	1	11.1														
Formalization	2	8	88.9			3	60			1	100			1	50.0		
	3			1.88	.333	2	40	2.40	.5477			2.0	0	1	50.0	2.50	.7071
Low	4																

Variable		Universities N=2				Private Colleges N=2				Consultants Group N=1				Professional Associations N=4			
Mean Value		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
High	1																
	2													2	50		
Formalization	3	2	100	3.0	0					1	100	3.0	0	1	25	2.75	.9574
Low	4					1	100	4.0	0					1	25		

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
Mean Value		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
High	1												
	2					1	100	2.0	0				
Formalization	3	1	100	3.0	0					1	100	3.0	0
Low	4												

measure of formalization. Each document was scored with a value of two. The organization with the lowest mean number of documents was the consultants' group and the organization with the most documents was the diploma school organizations.

Yet, in response to questions measuring formalization (Table 87) hospitals have the highest score for formalization which would be associated with written documents. Yet, on Table 89, hospitals have an average of 18.44 for number of written documents. Consultants'groups have few (15) written documents and diploma schools have the most (22).

An ANOVA was done for formalization and for written documents.

Formalization. The between-group score was .7518 and the within-group score was .3141. For a total of 27 degrees of freedom, the F score was 2.3939, which is significant at the .0544. The ETA score was .5848. Based on these data, the researcher would accept the hypothesis of no difference. These data are displayed in Table 88.

Table 88

Table Displaying the ANOVA for Between and Within Groups for the Variable - Formalization

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	7.5183	10	.7518
Within Groups	5.3389	17	.3141
Total	12.8571	27	

F = 2.3939; Sig. = .0544; ETA Sqrd. = .5848

Written documents. The between-groups score was 5.5156 and the within-group score was 5.8984. For a total of 27 degrees of freedom, the F score was .9351,which is significant at the .5268 level. The ETA score was .3549. Based on these data the researcher would fail to reject the hypothesis of no difference. These data are displayed in Table 90.

Table 89

Table Displaying the Number and Percent of each Option for the Variable - Number of Written Documents, for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Number of Written Documents	15	1	11.1	18.44	2.60			19.20	2.04			21.0	0			19.5	3.53
	16	2	22.2			1	20.0										
	17	1	11.1											1	50.0		
	18	1	11.1														
	19					2	40.0										
	20	1	11.1														
	21	2	22.2			2	40.0			1	100						
	22	1	11.1											1	50.0		

Variable		Universities N=2				Private Colleges N=2				Consultants Group N=1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Number of Written Documents	15			19.0	1.41			20.0	0	1	100	15.0	0			19.75	2.21
	16																
	17													1	25		
	18	1	50.0														
	19													1	25		
	20	1	50.0			1	100							1	25		
	21																
	22													1	25		

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Number of Written Documents	15			17.0	0	1	100	15.0	0			22.0	0
	16												
	17	1	100										
	18												
	19												
	20												
	21												
	22									1	100		

Table 90

Table Displaying the ANOVA for Between and Within Groups for the Variable - Written Documents

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	55.1563	10	5.5156
Within Groups	100.2722	17	5.8984
Total	155.4286	27	

F = .9351; Sig. = .5268; ETA Sqrd. = .3549

Mechanization. The degree of mechanization was analyzed for each type of organization. Universities and community colleges had the most inanimate sources of energy. Professional organizations had the least amount of mechanization. Table 91 displays these data.

An ANOVA was done for the degree of mechanization. The between-group score was 27.8025 and the within-group score was 4.5111. For 27 degrees of freedom, the F score was 6.1631, which was significant at the .0006 level. The ETA score was .7838. Based on these data, the researcher would accept the hypothesis of no difference. The data are displayed in Table 92.

Table 91

Table Displaying the Number and Percent of each Option for the Variable - Mechanization, for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Mechanization Low	6	1	11.1	8.88	1.76			15.2	2.28	1	100	6.0	0			13.0	4.24
	8	4	44.4														
	10	3	33.3														
	12	1	11.1			1	20.0										
	14					1	20.0							1	50		
	16					2	40.0							1	50		
High	18					1	20.0										

Variable		Universities N=2				Private Colleges N=2				Consultants Groups N=1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Low	6													2	50		
	8					1	100			1	100			1	25		
	10							8.0	0			8.0	0	1	25	7.50	1.91
Mechanization	12			15.0	1.414												
	14	1	50														
	16	1	50														
High	18																

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Mechanization Low	6												
	8												
	10					1	100						
	12												
	14	1	100	14.0	0			10.0	0	1	100	14.0	0
	16												
	18												

Table 92

Table Displaying the ANOVA for Between and Within Groups for the Variable - Mechanization

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	278.0254	10	27.8025
Within Groups	76.6889	17	4.5111
Total	354.7143	27	

F = 6.1631; Sig. = .0006; ETA Sqrd. = .7838

Motivation. The degree of motivation was analyzed by each organizational type. The clinic organization demonstrated the highest degree of motivation with a mean score of 52 while the hospital organizations had the mean score of 59.44. (The lower the score, the higher the degree of motivation.) Table 93 displays these data.

An ANOVA was done. The between-group score is 30.2028 and the within-group score was 31.5984. For a 27 degrees of freedom, the F score was .9560. This was significant at the .5116 level. Based on these data the researcher would fail to reject the hypothesis of no difference. These data are displayed in Table 94.

Table 93

Table Displaying the Number and Percent of each Option for the Variable - Motivation for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
High	47																
	48					1	20										
	50																
	51					1	20										
	52	1	11.1			1	20			1	100						
	53	1	11.1									52.0	0				
Degree	55	1	11.1														
	56			59.44	5.45			55.40	7.40							58.50	.7071
of	58	1	11.1											1	50		
	59													1	50		
Motivation	60	1	11.1			1	20										
	61	1	11.1														
	63	1	11.1														
	65	1	11.1														
	66					1	20										
	67																
Low	68	1	11.1														

Variable		Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Associations N=4			
		No	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
High	47													1	25		
	48																
	50																
	51																
Degree	52																
	53													1	25		
of	55																
	56													1	25		
Motivation	58	1	50	58.50	.7071											53.75	5.123
	59	1	50							1	100	59.0	0	1	25		
	60																
	61							67.0	0								
	63																
	67					1	100										
Low	68																

Table 93 (Continued)

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
	High 47	1	25										
	48												
	50	1	100										
	51												
	52												
Degree	53												
	55					1	100	55.0	0				
of	56			50.0	0								
	58												
Motivation	59									1	100	59.0	0
	60												
	61												
	63												
	65												
	66												
	67												
	Low 68												

Table 94

Table Displaying the ANOVA for Between and Within Groups for the Variable - Motivation

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	302.0778	10	30.2078
Within Groups	537.1722	17	31.5984
Total	839.2500	27	

F = .9560; Sig. = .5116; ETA Sqrd. = .3599

Bases of Power. The social bases of power identified by the different types of organization were: referent, expert, legitimate and coercive. Only one organization (hospital) identified coercive as the base of power. Most organizations (14): hospitals (4), community colleges (2), clinics (1), vocational-technical schools (2), universities (1), consultants (1), professional organizations (1), continuing education (1), diploma schools (1) identified the expert as their base of power. Table 95 displays these data.

An ANOVA was done. The between-group score was 1.0685 and the within-group score was 1.4954. For a total of 27 degrees of freedom, the F score was .7145. This was significant only at the .7007 level. The ETA squared was .2959. Based on these data, the researcher would fail to reject the hypothesis of no difference. These data are displayed in Table 96.

Table 95

Table Displaying the Number and Percent of each Option for the Variable - Bases of Power for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Bases of Power	Referrant 1	2	22.2			3	60.0										
	Expert 2	4	44.4			2	40.0			1	100			2	100		
	Legitimate 4	2	22.2	2.55	1.42			1.40	.547			2.0	0			2.0	0
	Coercive 5	1	11.1														

Variable		Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Bases of Power	Referrant 1													2	20		
	Expert 2	1	50							1	100			1	25		
	Legitimate 4	1	50	3.0	1.41	1	100	4.0	0			2.0	0	1	25	2.0	1.41
	Coercive 5																

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Bases of Power	Referrant 1					1	100						
	Expert 2	1	100							1	100		
	Legitimate 4			2.0	0			1.0	0			2.0	0
	Coercive 5												

Table 96

Table Displaying the ANOVA for Between and Within Groups for the Variable - Bases of Power

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	10.6849	10	1.0685
Within Groups	25.4222	17	
Total	36.1071	27	

F = .7145; Sig. = .7007; ETA Sqrd. = .2959

Routinization. The degree of routinization for each organization was analyzed: universities, private colleges, professional organizations, continuing education, and long-term care organizations identified that their organizations were non-routine. Hospitals, community colleges, clinics, vocational-technical, consultants and diploma school organizations perceived their organization to be more routine. (Table 97 displays these data.) This compares with the higher degree of formalization (Table 87) of hospitals, community colleges, vocational-technical, clinic organizations which may influence the routine nature of their task.

An ANOVA was carried out. Between groups were calculated at .3307 and the within group was .1647. The F score for 27 degrees of freedom was 2.0079. This was significant at the .0989 level. The ETA squared was .5415. The researcher, based on these data, would fail to reject

Table 97

Table Displaying the Number and Percent of each Option for the Variable - Routinization for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Non-Routine	1																
	2	6	66.7			4	80.0										
Routine	3	3	33.3	2.33	.50	1	20.0	2.20	.4472	1	100	3.0	0	2	100	3.0	0

Variable		Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Non-Routine	1	2	100			1	100							4	100		
	2			1.0	0			1.0	0	1	100	2.0	0			1.0	0
Routine	3																

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Non-Routine	1	1	100			1	100						
	2			1.0	0			1.0	0	1	100	2.0	0
Routine	3												

the hypothesis of no difference. These data are displayed in Table 98.

Table 98

Table Displaying the ANOVA for Between and Within Groups for the Variable - Routinization

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	3.3071	10	.3307
Within Groups	2.8000	17	.1647
Total	6.1071	27	

F = 2.0079; Sig. = .0989; ETA Sqrd. = .5415

Satisfaction. The degree of satisfaction was measured on the following subconcepts: security, social, esteem, autonomy, and self-realization. Each of these subconcepts was examined for each type of organization.

Security. All organizations identified a high degree (with 0 being high) of security except the long-term care organizations.

Social. Almost all organizations identified a middle to high degree of social satisfaction except the consultant organizations.

Esteem. Self-esteem satisfaction was shown to be at the middle to high degree in all organizations.

Autonomy. The autonomy level was identified to be

high in all organizations except the clinic organizations.

Self-Realization. Self-realization satisfaction was at a middle to low degree in sixteen of the organizations among the following types: hospitals (6), community colleges (4), clinics (1), vocational-technical (1), private colleges (1), professional organizations (2), long-term care (1), and diploma schools (1). These data are displayed in Table 99.

An ANOVA analysis was not done on security, social, and autonomy subconcepts as the sum of squares was zero and the statistics were suppressed. An ANOVA was done for esteem and self-realization subconcepts of satisfaction.

For esteem subconcept the in-between score was .1438 and the within group score was .2083. For a total of 14 degrees of freedom, the F score was .6900. This is significant only at the .6945 level. Based on these data, the researcher would fail to reject the hypothesis of no difference. These data are displayed in Table 100.

Table 99

Table Displaying the Number and Percent of each Option for the Variable - Satisfaction for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
Satisfaction		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Security	High 0	6	66.6			3	60			1	100			2	100		
	1	3	33.3			2	40										
	Low 2																
Social	High 0	6	66.6			4	75			1	100			1	50		
	Low 1	3	33.3			1	25							1	50		
Esteem	High 0	5	55.5			3	60							1	50		
	1	3	33.3			1	20			1	100			1	50		
	Low 2	1	11.1			1	20										
Autonomy	High 0	6	66.6			3	60							2	100		
	1	3	33.3			2	40										
	Low 2									1	100						
Self Realization	High 0	3	33.3			1	20							1	50		
	1	4	44.4			3	60			1	100			1	50		
	Low 2	2	22.2			1	20										

Variable		Universities N=2				Private Colleges N=1				Consultants Groups N=1				Professional Associations N=1			
Satisfaction		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Security	High 0	1	50			1	100			1	100			3	75		
	1	1	50											1	25		
	Low 2																
Social	High 0	2	100			1	100							2	50		
	Low 1									1	100			2	50		
Esteem	High 0	1	50			1	100							1	25		
	1	1	50							1	100			3	75		
	Low 2																
Autonomy	High 0	2	100			1	100			1	100			2	50		
	1													2	50		
	Low 2																
Self Realization	High 0	2	100							1	100			2	50		
	1					1	100							1	25		
	Low 2													1	25		

Table 99 (Continued)

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
Satisfaction		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Security	High 0												
	1	1	100							1	100		
	Low 2					1	100						
Social	High 0	1	100			1	100			1	100		
	Low 1												
Esteem	High 0									1	100		
	1	1	100										
	Low 2					1	100						
Autonomy	High 0	1	100			1	100			1	100		
	1												
	Low 2												
Self Realization	High 0	1	100										
	1									1	100		
	Low 2					1	100						

Table 100

Table Displaying the ANOVA for Between and Within Groups for the Variable Satisfaction - Esteem

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	1.1500	8	.1438
Within Groups	1.2500	6	.2083
Total	2.4000	14	

F = .6900; Sig. = .6945; ETA Sqrd. = .4792

An ANOVA was done for the subconcept self-realization. The between-group score was .1352 and the within-group score was .2870. For a total of 16 degrees of freedom, the F score was .4709, which was significant only at the .8335 level. The ETA squared was .2681. Based on these data, the researcher would fail to reject the hypothesis of no difference. Table 101 displays these data.

Table 101

Table Displaying the ANOVA for Between and Within Groups for the Variable Satisfaction - Self-Realization

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	.9461	7	.1352
Within Groups	2.5833	9	.2870
Total	3.5294	16	

F = .4709; Sig. = .8335; ETA Sqrd. = .2681

Size. The size of the different types of organizations was analyzed according to the number of personnel and the size of the budget.

Number of Personnel. One clinic, one hospital, two professional organizations and one diploma organization had no full-time personnel. Two hospitals and two university organizations had three to four full-time personnel. These data are displayed in Table 102.

An ANOVA was done. The between-group score was .5075 and the within-group score was .2288. For a total of 27 degrees of freedom, the F score was 2.2187, which is significant only at the .0712 level. The ETA squared score was .5662. Based on these data, the researcher would fail to reject the hypothesis of no difference. These data are displayed in Table 103.

Table 102

Table Displaying the Number and Percent of each Option for the Variable - Size - Number of Personnel for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Size # Personnel	No full-time	1	11.1							1	100						
	1-2 full-time	6	66.7			5	100							2	100		
	3-4 full-time	2	22.2	2.11	.609			2.0	0			1.0	0			2.0	0

Variable		Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Size # Personnel	No full-time													2	50		
	1-2 full-time					1	100	2.0	0	1	100	2.0	0	2	50	1.50	.577
	3-4 full-time	2	100	3.0	0												

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Size # Personnel	No full-time									1	100		
	1-2 full-time	1	100	2.0	0	1	100	2.0	0			1.0	0
	3-4 full-time												

Table 103

Table Displaying the ANOVA for Between and Within Groups for the Variable — Size - Number of Personnel

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	5.0754	10	.5075
Within Groups	3.8889	17	.2288
Total	8.9643	27	

F = 2.2187; Sig. = .0712; ETA Sqrd. = .5662

Size of the Budget. Two organizations (clinic and continuing education) declined to identify the size of the budget. Those organizations with the largest budgets were hospitals (4), community colleges (2), vocational-technical (1), universities (1), professional associations (1) and diploma schools (1). Those organizations with no money budgeted for their organizations included: hospitals (2), community colleges (1), vocational-technical (1), universities (1), professional organizations (1) and long-term care (1). These data are displayed in Table 104.

An ANOVA was done. The between-group score was 4.6859 and the within-group score was 5.5356. For a total of 27 degrees of freedom, the F score was .8465, which is significant only at the .5943 level. The ETA squared score was .3324. Based on these data, the researcher would fail to reject the hypothesis of no difference. These data are

Table 104

Table Displaying the Number and Percent of each Option for the Variable - Size - Budget for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
	In Dollars	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
	0	2	22.2			1	20.0							1	50		
Size	0-5,000																
	6-10,000	1	11.1			2	40.0										
Budget	11-15,000	1	11.1	4.22	2.108			3.80	2.16								
	16-20,000	1	11.1									7.0	0			3.50	3.53
	> 20,000	4	44.4			2	40.0							1	50		
	No Response									1	100						

Variable		Universities N=2				Private Colleges N=1				Consultants Group N=1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
	0	1	50											1	25		
Size	0-5,000					1	100							2	50		
	6-10,000							2.0	0							2.75	2.21
Budget	11-15,000			3.50	3.53							7.0	0				
	16-20,000																
	20,000	1	50											1	25		
	No Response									1	100						

Variable		Continuing Education N=1				Long-Term Care N=1				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
	0					1	100						
Size	0-5,000												
	6-10,000												
Budget	11-15,000							1.0	0			6.0	0
	16-20,000			7.0	0								
	> 20,000									1	100		
	No Response	1	100										

displayed in Table 105.

Table 105

Table Displaying the ANOVA for Between and Within Groups for the Variable - Size - Budget

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	46.8587	10	4.6859
Within Groups	94.1056	17	5.5356
Total	140.9643	27	

F = .8465; Sig. = .5943; ETA Sqrd. = .3324

Span of Control. The variable span of control was analyzed for each type of organization. Universities (1), hospitals (1), clinic organizations (1) indicated a relatively high level (6) span of control. Those organizations with a low span of control (1) was one hospital. Most organizations had 2-3 people in their span of control. Table 106 displays these data.

An ANOVA was done. The between-group score was 2.3525 and the within-group score was 3.6582. For a total of 27 degrees of freedom, the F score was .6431,which is significant at the .7588 level. The ETA squared score was .2745. Based on these data, the researcher would fail to reject the hypothesis of no difference. These data are displayed in Table 107.

Table 106

Table Displaying the Number and Percent of each Option for the Variable - Span of Control for each Type of Organization with the Mean (M) and Standard Deviation (SD) for each Type of Organization

Variable		Hospitals N=9				Community Colleges N=5				Clinics N=1				Vocational-Technical N=2			
Total Number		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Span of Control	Low 1	1	11.1	2.88	1.69			3.8	2.94			6.0	0			2.50	.707
	2	5	55.6			2	40							1	50		
	3					2	40							1	50		
	4	1	11.1														
	5	1	11.1														
	6	1	11.1							1	100						
	High 9					1	20										

Variable		Universities N=9				Private Colleges N=1				Consultants Group N=1				Professional Associations N=4			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Span of Control	Low 1			5.0	1.41	1	100	4.0	0	1	100	2.0	0	1	25	3.0	.816
	2													2	50		
	3													1	25		
	4	1	50														
	5																
	6	1	50														
	High 9																

Variable		Continuing Education N=1				Long Term Care N=1				School of Nursing Diploma N=1			
		No.	%	M	SD	No.	%	M	SD	No.	%	M	SD
Span of Control	Low 1			4.0	0			2.0	0			2.0	0
	2					1	100			1	100		
	3												
	4	1	100										
	5												
	6												
	High 9												

Table 107

Table Displaying the ANOVA for Between and Within Groups for the Variable - Span of Control

	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	23.5254	10	2.3525
Within Groups	62.1889	17	3.6582
Total	85.7143	27	

F = .6431; Sig. = .7588; ETA Sqrd. = .2745

Data which describe the organization using the conceptual framework - the anatomy of an organization. The conceptual model adopted by this researcher to aid in understanding the concept: organization and its components were identified earlier in Chapter 3. In brief, the organizations' elements have been likened to the anatomical structure of the human organism. These are:

-Bone (structure)
-Heart (power)
-Nerves (communication)
-Muscle (budget, manpower, technology)
-Blood (motivation, satisfaction)

The work of the organization or effectiveness was then measured in this study by the number of programs, number of participants, and the length of the program.

The variables, which have been individually examined, were also then grouped to describe an organization using this conceptual model. Table 108 shows the major concepts and the

variables that were grouped to describe each concept.

Table 108

Table Showing the Major Concepts of the Model and the Variables that were Grouped to Measure that Concept

Concept	Variables
Bone (structure)	Formalization Routinization Dispersion Span of Control
Heart (power)	Autonomy Bases of Power Hierarchy of Authority Centralization
Nerves	Communication Coordination
Muscles	Size of Professional Staff-Secretarial Budget Technology (mechanization)
Blood	Motivation Satisfaction
Work	Effectiveness

The eleven different organizations were analyzed for differences,using the grouped variables to describe the concepts of the model. The means for each variable for each organization were obtained. Table 109 displays these data.

Table 109

Table Displaying Means (M) and Standard Deviation (SD) for each of the Concepts for each of the Different Types of Organizations

	Hospitals N=9		Community College N=5		Clinics N=1		Voc-Tech N=2		Universities N=2		Private College N=1		Consultants Group N=1	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Bone (Structure)	23.66	2.64	25.2	1.78	27.0	0	27.0	4.24	25.0	1.41	27.0	0	24.0	0
Heart (Power)	18.0	5.47	19.2	4.43	24.0	0	15.0	1.41	21.5	.707	22.0	0	31.0	0
Nerves (Communication)	32.7	3.63	31.4	5.02	33.0	0	31.5	7.77	30.5	2.12	25.0	0	23.0	0
Muscles (Budget-Manpower)	17.5	4.21	24.8	2.38	16.0	0	22.5	7.77	24.5	6.36	15.0	0	18.0	0
Blood (Motivation)	61.8	4.80	58.0	6.81	56.0	0	60.0	1.41	59.5	.707	68.0	0	61.0	0
Work (Effectiveness)	9.11	4.37	9.80	1.30	9.0	0	9.50	.707	8.00	4.24	8.00	0	9.00	0

	Professional Associations N=4		Continuing Education N=1		Long-Term N=1		School of Nursing Diploma N=1	
	M	SD	M	SD	M	SD	M	SD
Bone	26.75	2.50	24.0	0	20.0	0	29.0	0
Heart	19.50	2.64	26.0	0	18.0	0	19.0	0
Nerves	29.5	12.8	30.0	0	29.0	0	26.0	0
Muscles	15.0	3.91	26.0	0	16.0	0	23.0	0
Blood	56.5	5.25	52.0	0	61.0	0	61.0	0
Work	8.75	4.92	7.00	0	6.00	0	10.0	0

Structure

Diploma organizations have the highest mean (29) and the long-term care have the lowest mean (20).

Heart-Power

Vocational-technical organizations have the lowest mean (15) with the consultant organizations having the highest mean (31).

Muscle

Continuing education organizations have the highest mean (26) and private colleges and professional associations have the lowest mean (15).

Blood

Private college organizations have the highest mean (68) and the continuing education organizations have the lowest mean (52).

Work-Effectiveness

Diploma organizations have the highest mean (10) while continuing education organizations have the lowest mean (7).

Data which describe educational and non-educational institutions. The researcher then examined educational and non-educational organizations. This dilineation of organizations into educational and non-educational was based upon the stated primary purpose of each organization. This differentiation was displayed in Figure 9, page 79. In brief, the eleven organizations studied were in the following

categories:

Educational

Universities
Private Colleges
Vocational-technical Colleges
Schools of Nursing
Community Colleges

Non-Educational

Hospitals
Long-term Care
Clinics
Professional Associations
Continuing Education Associations
Consultant Groups

A mean and standard deviation was obtained for each group (educational and non-educational) for each concept (structure, power, nerves, blood, muscle, and effectiveness). Then an F-Test was done for an analysis of variance and a pooled T was done to see if there was any statistical significant difference in educational and non-educational organizations used in this study. These data are displayed in Table 110. The only significant differences were found at the .002 level on the concept: Muscle. The budget allocations did vary among the organizations.

Data which describe multi, limited and single purpose organizations. Further, the organizations were grouped according to multi, limited and single purposed organizations. Since there were limited differences among educational and non-educational organizations, the researcher then grouped the organizations by purpose. This differentiation was shown in Figure 8, page 78.

Table 110

Table Displaying Number, Mean, Standard Deviation, Standard Error, F Value, T Value for Pooled Variance and Separate Variance Estimate for Educational and Non-educational Organizations for the Major Concepts of the Model

Variable	Number of Cases	Mean	Standard Deviation	Standard Error	F Value	2-Tail Prob.	T Value	Degrees-Freedom	2-Tail Prob.	T Value	Degrees Freedom	2-Tail Probl.
Structure												
Group 1	11	26.0000	2.236	.674	1.60	.454	1.57	26	.129	1.65	24.81	.111
Group 2	17	24.4118	2.830	.686								
Power												
Group 1	11	19.0909	3.673	1.107	2.20	.208	-.45	26	.654	-.49	25.91	.626
Group 2	17	19.9412	5.448	1.321								
Nerves												
Group 1	11	30.1818	4.708	1.419	2.00	.268	-.38	26	.708	-.41	25.71	.687
Group 2	17	31.0588	6.656	1.614								
Blood												
Group 1	11	59.8182	5.231	1.577	1.02	.934	.11	26	.910	.11	21.32	.910
Group 2	17	59.5882	5.173	1.255								
Muscle												
Group 1	11	23.2727	4.563	1.376	1.15	.774	3.53	26	.002	3.48	20.38	.002
Group 2	17	17.2941	4.254	1.032								
Effect												
Group 1	11	9.2727	1.794	.541	4.61	.019	.45	26	.653	.52	24.18	.604
Group 2	17	8.7059	3.853	.934								

Briefly, this was:

Multi-purposed Organizations: (N=22)

Hospitals - 9
Universities - 2
Private Colleges - 1
Voc-Tech - 2
Long-term Care - 1
Clinics - 1
Schools of Nursing - 1
Community Colleges - 5

Limited Purpose Organizations: (N=4)

Professional Organizations - 4

Single Purpose Organizations: (N=2)

Continuing Education Associations - 1
Consultant Groups - 1

The organizations were grouped by multi, limited, and single purpose and were analyzed using the major concepts of the model (structure, power, nerves, blood, muscle and effectiveness).

Structure. (Includes formalization, routinization, dispersion and span of control scores.) Multi-purpose organizations have the highest percent (17.9) of structure and also shares the lowest percent (3.6) with limited purpose organizations. Table 111 displays these data.

The mean values for structure for each of the organization groups were computed. Limited purpose organizations have the highest mean structure with multi-purposed organizations having the lowest value. Table 112 displays these data.

Table 111

Table Displaying the Values for Concept Structure for Multi, Limited, and Single Purposed Organizations with the Number, Row, Column and Total Percent for Values of Structure

STRUCTURE	(Includes formalization, routinization, dispersion and span of control scores)											
	20	21	22	23	24	25	26	27	28	29	30	Row Total
1. Multi Purpose	2 9.1 100.0 7.0	1 4.5 100.0 3.6	2 9.1 100.0 7.1	1 4.5 100.0 3.6	5 22.7 62.5 17.9	1 4.5 100.0 3.6	3 13.6 75.0 10.7	4 18.2 80.0 14.3	1 4.5 100.0 3.6	1 4.5 100.0 3.6	1 4.5 50.0 3.6	22 78.6
2. Limited Purpose	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	1 25.0 12.5 3.6	0 0 0 0	1 25.0 25.0 3.6	1 25.0 25.0 3.6	0 0 0 0	0 0 0 0	1 25.0 50.0 3.6	4 14.3
3. Single Purpose	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	2 100.0 25.0 7.1	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	2 7.1
Column Total	2 7.1	1 3.6	2 7.1	1 3.6	8 28.6	1 3.6	4 14.3	5 17.9	1 3.6	1 3.6	2 7.1	28 100.0

Table 112

Table Displaying the Mean Value for Structure for Multi, Limited and Single Purposed Organizations

Type of Organizational Group	Total Number of Organizations	Total Value for Structure	Mean Value for Structure
Multi	22	516	23.40
Limited	4	107	26.75
Single	2	57	28.5

Power. (Includes autonomy, bases of power, hierarchy of authority and centralization scores.) Multi, limited and single purposed organizations were analyzed in terms of this concept. Single purposed organizations have the highest values (26 and 31). Limited purposed organizations are grouped midway (19-22), while multi-purposed organizations have a wider range (9-27). Table 113 displays these data. The mean values were computed. Single purposed organizations have the highest mean value, while multi and limited purposed are the same. Table 114 displays these data.

Table 113

Table Displaying the Values for the Concept Power for Multi, Limited and Single Purposed Organizations with the Number and the Percent for Row, Column and Total for Values of Power

Power (Includes Autonomy, bases of power, hierarchy of authority and centralization)	9	12	14	15	16	17	18	19	20	21	22	23	24	26	27	31	Row Total
1. Multi	1	1	1	1	2	1	5	1	2	1	2	1	1	0	2	0	22
Purpose	4.5	4.5	4.5	4.5	9.1	4.5	22.7	4.5	9.1	4.5	9.1	4.5	4.5	0	9.1	0	78.6
	100.0	100.0	100.0	100.0	66.7	100.0	100.0	50.0	100.0	50.0	66.7	100.0	100.0	0	100.0	0	
	3.6	3.6	3.6	3.6	7.1	3.6	17.9	3.6	7.1	3.6	7.1	3.6	3.6	0	7.1	0	
2. Limited	0	0	0	0	1	0	0	1	0	1	1	0	0	0	0	0	4
Purpose	0	0	0	0	25.0	0	0	25.0	0	25.0	25.0	0	0	0	0	0	14.3
	0	0	0	0	33.3	0	0	50.0	0	50.0	33.3	0	0	0	0	0	
	0	0	0	0	3.6	0	0	3.6	0	3.6	3.6	0	0	0	0	0	
3. Single	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Purpose	0	0	0	0	0	0	0	0	0	0	0	0	0	50.0	0	50.0	7.1
	0	0	0	0	0	0	0	0	0	0	0	0	0	100.0	0	100.0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	3.6	0		
Column Total	1	1	1	1	3	1	5	2	2	2	3	1	1	1	2	1	28
	3.6	3.6	3.6	3.6	10.7	3.6	17.9	7.1	7.1	7.1	10.7	3.6	3.6	3.6	7.1	3.6	100.0

Table 114

Table Displaying the Number, Total and Mean Value for Power for Multi, Limited and Single Purposed Organizations

Type of Organizational Group	Total Number of Organizations	Total Value for Power	Mean Value for Power
Multi	22	429	19.5
Limited	4	78	19.5
Single	2	57	28.5

Nerves. (Includes communication and coordination scores.) Multi-purposed organizations have highest values for nerves (24-37). Limited purposed organizations are at either extremes with two organizations at the lower end of values for nerves (18, 20) and two organizations at the upper end (35, 45). Single purposed organizations are more toward the middle of the range (23, 30). Table 115 displays these data.

The mean values for the nerves for each of the organization groups were computed. Multi-purposed organizations have the highest mean value (31.3). Limited purpose organizations have the next highest (29.5) while single purpose organizations have the lowest (26.5). Table 116 displays these data.

Table 115

Table Displaying the Values for the Concept Nerves for Multi, Limited, and Single Purposed Organizations with the Number and the Percent for Row, Column for Total Values for Nerves

NERVES (Includes communication and coordination scores)

	18	20	23	24	25	26	29	30	31	32	33	34	35	36	37	45	ROW TOTAL
1. Multi Purpose	0	0	0	1	1	3	3	2	1	1	1	3	2	1	3	0	22
	0	0	0	4.5	4.5	13.6	13.6	9.1	4.5	4.5	4.5	13.6	9.1	4.5	13.6	0	78.6
	0	0	0	100.0	100.0	100.0	100.0	66.7	100.0	100.0	100.0	100.0	66.7	100.0	100.0	0	
	0	0	0	3.6	3.6	10.7	10.7	7.1	3.6	3.6	3.6	10.7	7.1	3.6	10.7	0	
2. Limited Purpose	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4
	25.0	25.0	0	0	0	0	0	0	0	0	0	0	25.0	0	0	25.0	14.3
	100.0	100.0	0	0	0	0	0	0	0	0	0	0	33.3	0	0	100.0	
	3.6	3.6	0	0	0	0	0	0	0	0	0	0	3.6	0	0	3.6	
3. Single Purpose	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2
	0	0	50.0	0	0	0	0	50.0	0	0	0	0	0	0	0	0	7.1
	0	0	100.0	0	0	0	0	33.3	0	0	0	0	0	0	0	0	
	0	0	3.6	0	0	0	0	3.6	0	0	0	0	0	0	0	0	

Table 116

Table Displaying the Number, Total and Mean Value for Nerves, for Multi, Limited and Single Purposed Organizations

Type of Organizational Group	Total Number of Organizations	Total Value for Nerves	Mean Value for Nerves
Multi	22	689	31.3
Limited	4	118	29.5
Single	2	53	26.5

Blood. (Includes motivation and satisfaction scores.) The multi-limited and single purposed organizations were analyzed for the concept blood. Multi-purposed organizations had a higher range of scores (52-68) than the other organization groups. Limited purpose scores ranged from 51-61, while single purpose scores ranged from 52 to 61. Table 117 displays these data.

Mean values for each of the organization groups were computed. There was no difference in mean values for the concept blood for limited (56.5) and single purposed (56.5) organizations. The multi-purposed organization group had the highest mean (60.54). Table 118 displays these data.

Table 117

Table Displaying the Values for the Concept Blood for Multi, Limited and Single Purposed Organizations with the Number and Percent for Row, Column and Total Values for Blood

BLOOD (Includes motivation, satisfaction scores)	51	52	53	55	56	57	59	60	61	62	64	65	67	68	Row Total
1. Multi Purpose	0	1	2	1	1	1	2	2	4	2	1	1	1	3	22
	0	4.5	9.1	4.5	4.5	4.5	9.1	9.1	18.2	9.1	4.5	4.5	4.5	13.6	78.6
	0	50.0	66.7	100.0	100.0	100.0	100.0	100.0	57.1	100.0	100.0	100.0	100.0	100.0	
	0	3.6	7.1	3.6	3.6	3.6	7.1	7.1	14.3	7.1	3.6	3.6	3.6	10.7	
2. Limited Purpose	1	0	1	0	0	0	0	0	2	0	0	0	0	0	4
	25.0	0	25.0	0	0	0	0	0	50.0	0	0	0	0	0	14.3
	100.0	0	33.3	0	0	0	0	0	28.6	0	0	0	0	0	
	3.6	0	3.6	0	0	0	0	0	7.1	0	0	0	0	0	
3. Single Purpose	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2
	0	50.0	0	0	0	0	0	0	50.0	0	0	0	0	0	7.1
	0	50.0	0	0	0	0	0	0	14.3	0	0	0	0	0	
	0	3.6	0	0	0	0	0	0	3.6	0	0	0	0	0	
Column Total	1	2	3	1	1	1	2	2	7	2	1	1	1	3	28
	3.6	7.1	10.7	3.6	3.6	3.6	7.1	7.1	25.0	7.1	3.6	3.6	3.6	10.7	100.0

Table 118

Table Displaying the Number, Total, Mean Value for Blood for Multi, Limited and Single Purposed Organizations

Type of Organizational Group	Total Number of Organizations	Total Value for Blood	Mean Value for Blood
Multi	22	1332	60.54
Limited	4	226	56.50
Single	2	113	56.50

Muscle. (Includes budget, mechanization, size of professional and administrative staff.) Multi-purposed organizations had the widest range of scores from 10 to 29. Limited purpose organizations tended to be more at the lower end of the scale (11-20) and single purposed organizations tended to be at the upper end of the scale (18-26). Table 119 displays these data.

The mean values for muscle were computed for multi, limited and single purposed organizations. Single purposed organizations had the highest mean (22) and limited purposed organizations had the lowest mean (15). Table 120 displays these data.

Table 119

Table Displaying the Values for the Concept Muscle for Multi, Limited and Single Purposed Organizations with the Number and Percent for Row, Column and Total for Values of the Muscle Concept

MUSCLE (Includes budget, mechanization, size of professional staff and administrative staff scores)

	10	11	13	15	16	17	18	19	20	21	22	23	24	25	26	28	29	Total
1. Multi Purpose	1	0	1	1	3	2	1	1	2	1	1	2	1	1	1	2	1	22
	4.5	0	4.5	4.5	13.6	9.1	4.5	4.5	9.1	4.5	4.5	9.1	4.5	4.5	4.5	9.1	4.5	78.6
	100.0	0	50.0	100.0	75.0	100.0	50.0	100.0	66.7	100.0	100.0	100.0	100.0	100.0	50.0	100.0	100.0	
	3.6	0	3.6	3.6	10.7	7.1	3.6	3.6	7.1	3.6	3.6	7.1	3.6	3.6	3.6	7.1	3.6	
2. Limited Purpose	0	1	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	4
	0	25.0	25.0	0	25.0	0	0	0	25.0	0	0	0	0	0	0	0	0	14.3
	0	100.0	50.0	0	25.0	0	0	0	33.3	0	0	0	0	0	0	0	0	
	0	3.6	3.6	0	3.6	0	0	0	3.6	0	0	0	0	0	0	0	0	
3. Single Purpose	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
	0	0	0	0	0	0	50.0	0	0	0	0	0	0	0	50.0	0	0	7.1
	0	0	0	0	0	0	50.0	0	0	0	0	0	0	0	50.0	0	0	
	0	0	0	0	0	0	3.6	0	0	0	0	0	0	0	3.6	0	0	
Column Total	1	1	2	1	4	2	2	1	3	1	1	2	1	1	2	2	1	28
	3.6	3.6	7.1	3.6	14.3	7.1	7.1	3.6	10.7	3.6	3.6	7.1	3.6	3.6	7.1	7.1	3.6	100.0

Table 120

Table Displaying the Number, Total, and Mean Value for Muscle for Multi, Limited and Single Purposed Organizations

Type of Organizational Group	Total Number of Organizations	Total Value for Muscle	Mean Value for Muscle
Multi	22	446	20.27
Limited	4	60	15.00
Single	2	44	22.00

Effectiveness. (Includes scores for number of programs, average number of participants and average length of program.) Multi, limited and single purposed organizations were analyzed on the concept effectiveness. Multi and limited purpose organizations both exhibited a wide range in scores (multi: 5-20; limited: 5-16). Single purposed organizations were in the middle range (7-9). Table 121 displays these data.

Mean scores for effectiveness for multi, limited and single purposed organizations were computed. Multi-purposed organizations had the highest mean (9.04) with single purposed organizations having the lowest mean (8.00). Table 122 displays these data.

Table 121

Table Displaying the Values for the Concept Effectiveness for Multi, Limited and Single Purposed Organizations with the Number and Percent for Row, Column and Total for Values of the Effectiveness Concept

EFFECTIVENESS (Includes number of programs, average number of participants, average length of program scores)

	5	6	7	8	9	10	11	16	20	Row Total
1. Multi Purpose	2	2	1	4	5	4	3	0	1	22
	9.1	9.1	4.5	18.2	22.7	18.2	13.6	0	4.5	78.6
	66.7	100.0	25.0	100.0	83.3	100.0	100.0	0	100.0	
	7.1	7.1	3.6	14.3	17.9	14.3	10.7	0	3.6	
2. Limited Purpose	1	0	2	0	0	0	0	1	0	4
	25.0	0	50.0	0	0	0	0	25.0	0	14.3
	33.3	0	50.0	0	0	0	0	100.0	0	
	3.6	0	7.1	0	0	0	0	3.6	0	
3. Single Purpose	0	0	1	0	1	0	0	0	0	2
	0	0	50.0	0	50.0	0	0	0	0	7.1
	0	0	25.0	0	16.7	0	0	0	0	
	0	0	3.6	0	3.6	0	0	0	0	
Column Total	3	2	4	4	6	4	3	1	1	28
	10.7	7.1	14.3	14.3	21.4	14.3	10.7	3.6	3.6	100.0

Table 122

Table Displaying the Number, Total and Mean Value for Effectiveness for Multi, Limited and Single Purposed Organizations

Type of Organizational Group	Total Number of Organizations	Total Value for Effectiveness	Mean Value for Effectiveness
Multi	22	199	9.44
Limited	4	35	8.75
Single	2	16	8.00

Findings

The following findings were obtained as the result of this study:

1. The variables that were identified and that were measured in this study (Administrative staff, autonomy, communication, coordination, dispersion, effectiveness, formalization, mechanization, motivation, bases of power, routinization, satisfaction, size (budget-personnel) and span of control) were found to be present in some measure in all the organizations that were a part of this study.
2. Size as defined by the amount of budget and the number of personnel was measured and recorded in Table 43, page 138. Eighty-five percent of all ations had two or fewer personnel in the tion. This is not a large variation among

the twenty-eight organizations. Fifty-seven percent of the organizations had $10,000 and above budgeted. The size of the budget did not vary greatly among organizations.

3. Positive and negative feelings toward mandatory continuing education and the type of organization selected were assessed. Table 23, page 111, displays these data. Figure 12, page 112, displays the percent of participants in each category (favor/not favor mandatory continuing education) for the different organizations. The biggest difference between the favor and not favor mandatory continuing education was seen in only two categories, namely, hospital and community college. The only other difference was 1, 2 percent, or 0.
4. Positive and negative feelings toward mandatory nursing continuing education and the type of subject matter selected by the nurse were assessed. Table 22 displays these data. The following table, Table 123, displays the percent of participants in each category (favor/not favor mandatory continuing education) for the different types of selected programs.

Table 123

Table Displaying the Effect of Attitude Toward Mandatory Continuing Education and the Type of Program Identified as Being Valuable

Attitude Toward Mandatory Continuing Education	Nursing (PCT)	Nursing Process (PCT)	Manage-ment (PCT)	Liberal Arts (PCT)	Teaching (PCT)	Other (PCT)
Should be	31.7	19.3	3.5	25.2	1.8	18.3
Should not be	34.9	14.6	1.6	30.8	1.6	16.2
Difference	-3.2	4.7	1.9	-5.6	.2	2.1

5. The basic nursing education and highest level of the participant and their attitude toward mandatory continuing education was not assessed. The researcher did assess basic level of education of the respondents and attitude toward continuing education as the researcher did not judge this influence to be important to this study.

   There were relatively few participants (23.4 percent) who had additional education (see Table 7, page 88). The researcher did not include the attitude toward mandatory continuing education and additional education as a variable to be included in this study.

6. Most of the respondents of the study were diploma graduates (71 percent)(see Table 6, page 86) and

most of the respondents worked in a hospital setting (53.4 percent)(see Table 9, page 90). It is assumed by the researcher that basic education and work setting influenced the selection of the hospital organization as providing a valued program in continuing education.

Summary

Chapter 4 describes the data for Phase I and Phase II of this study. In Phase I the population, sample and respondent were described. Attitude toward mandatory continuing education was assessed and analyzed. In Phase II, the organizations that provide nursing continuing education were assessed, analyzing the identified variables to describe organizations collectively and then the eleven different types of organizations separately. The researcher developed a conceptual model, "The Anatomy of the Organization"; and all organizations were described using this model. Finally, organizations were grouped into educational and non-educational, and multi, limited, and single purposed for analysis. The findings of the study conclude the chapter.

Chapter 5

SUMMARY, DISCUSSION, IMPLICATIONS AND RECOMMENDATIONS

Summary

The Problem

The purpose of this study was to identify the components of organizations whose mission is nursing continuing education. Knowles, as identified earlier in this study (Chapter 1), has stated that the organization affects the quality of education, and thus it is important for the educator and administrator to be aware of and create the best possible organization which will offer the educational program.

The Procedures

The procedures followed in this study were divided into two phases. In Phase I of the study the researcher randomly selected 5 percent (N=1134) currently registered nurses in each county in the state of Iowa. By the use of a questionnaire, the researcher asked among other questions, what organization provided the nursing education program that the respondent deemed most valuable.

In Phase II of the study, the researcher, using tools suggested by Price, interviewed twenty-eight randomly

selected organizations which fit, by this researcher's definition, into eleven different types of organizations. The researcher developed a conceptual model, "The Anatomy of an Organization," and grouped the data for the different organizations to see if there were any difference among organizations. Organizations were then grouped into educational and non-educational. Finally, the organizations were grouped into multi, limited and single purposed organizations for comparison.

Discussion

Phase I

There were 813 or 72 percent of the randomly selected registered nurses who responded. At the end of Chapter 4 a complete summary of the findings in Phase I was given. Briefly, most of the nurses were diploma graduates working in a hospital setting. A positive attitude toward mandatory continuing education was seen to be present in most of the respondents. The main difference in positive and negative attitude toward mandatory continuing education was seen in those respondents' selection of hospital and community college organizations for programming. The type of programming selected was not greatly influenced by attitude toward mandatory continuing education.

Phase II

There were eleven different types of organizations

identified by the respondents. These organizations were assessed for the presence or absence of variables identified by Price. These variables included:

Administrative Staff
Autonomy
Centralization
Communication
Coordination
Dispersion
Effectiveness
Span of Control
Formalization
Mechanization
Motivation
Bases of Power
Routinization
Satisfaction
Size

These variables were found to be present in all the effective organizations identified by the respondents in Phase I of this study.

The researcher then grouped organizations by type and assessed each type using all of the variables. The researcher failed to reject the hypothesis of no difference for all variables except for autonomy, centralization, formalization and mechanization. For these variables, the researcher found support for the hypothesis of no difference.

The idea of the wholistic living entity of the organization assisted the researcher in developing the conceptual model, "The Anatomy of an Organization," shown in Figure 13, which was used to describe the organization.

Figure 13 depicts the major concepts of the

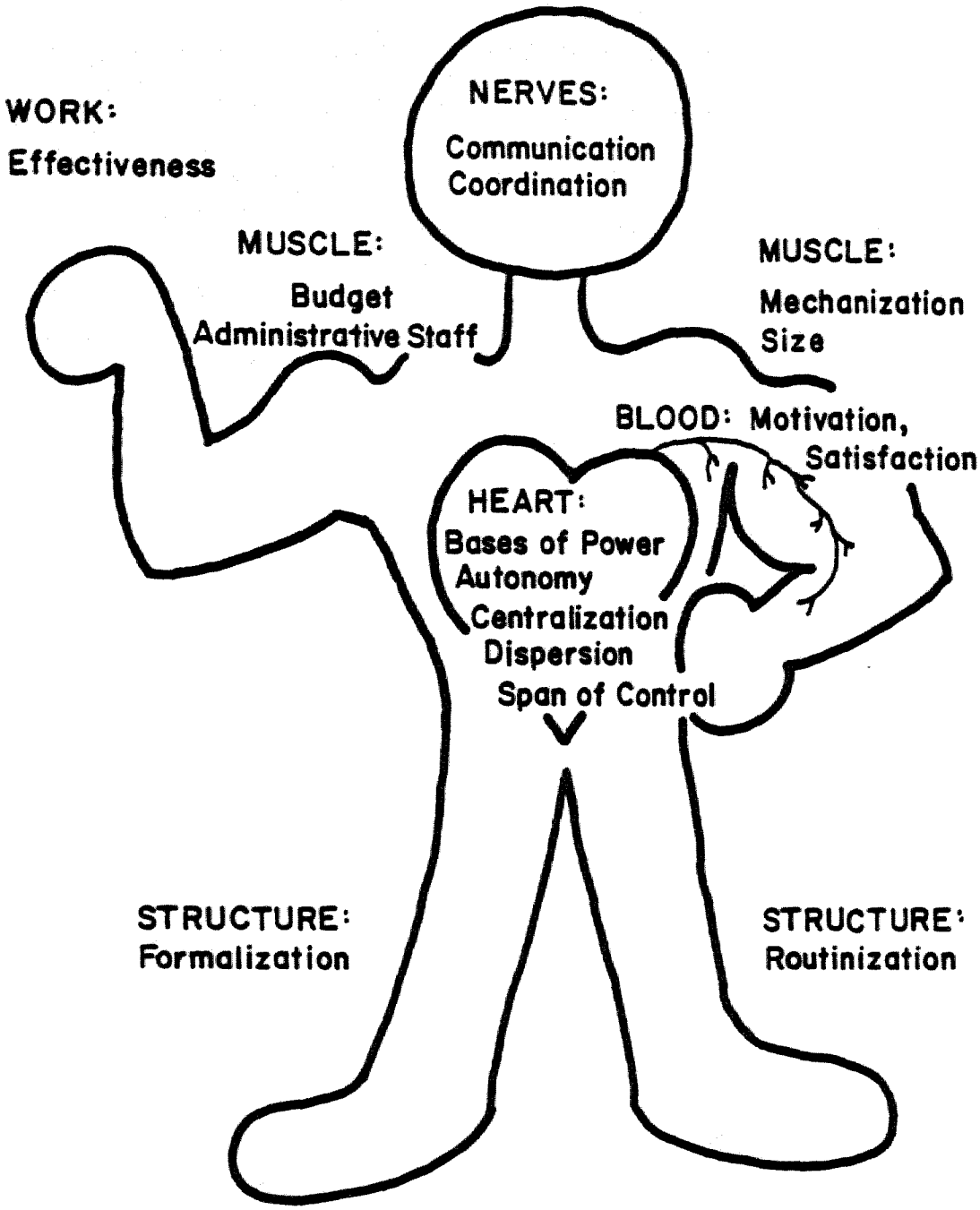

Figure 13. Figure showing the anatomy of an organization with the variables which measured the major concepts (nerves, structure, heart, muscle, blood, work).

conceptual model and the variables which were used to measure that concept. This anthropomorphic model helped bridge the communication gap by increasing the understanding of the nurse educator-administrator of the world of organizations.

The variables which were grouped to measure each concept were as follows:

Nerves

Communication and Coordination

Heart (Power)

Bases of Power
Autonomy
Centralization

Bone (Structure)

Formalization
Routinization
Dispersion
Span of Control

Muscle

Budget
Administrative Staff
Mechanization
Size-Personnel

Blood

Motivation
Satisfaction

The highest possible score that could have been obtained by any organization for each major concept was as follows:

Nerves - 78

Heart - 39

Bone - 30

Muscle - 40

Blood - 195 (lower the score, the higher the motivation and satisfaction)

The mean obtained by each type of organization for each concept was computed. Table 124 displays these data. Based on these data, Bone (Structure: Formalization, Routinization) was the strongest measure with Blood (Motivation and Satisfaction) next. This shows that an effective organization whose mission is nursing continuing education should be highly structured and have as a director a highly motivated and committed person. The least strong concept was Nerves (Communication and Coordination). In these relatively small organizations this component did not seem to be as important.

Therefore, an effective organization was shown to have distinctive components which can be grouped to describe various types of organizations. Figure 14 displays these components and the relationship to the mission of an effective organization.

Finally, the organizations were grouped by multi, limited and single purpose. An analysis of mean difference was computed for each of the major concepts. Table 125 shows this summary. These data indicate that single purposed organizations have the most structure, then multi or limited purpose, multi and limited purposed organizations have the least amount of nerves (communication and

Table 124

Table Displaying the Highest Possible Score for each Concept and the Mean Score Obtained by each Type of Organization

Highest Possible Score / Organization	Bone (Structure) 30	Blood (Motivation) 195*	Heart (Power) 39	Muscle (Size) (Budget) 40	Nerves (Communication) 78
Hospitals	23.7	61.8	18.0	17.5	32.7
Community Colleges	25.2	58.0	19.2	24.8	31.4
Clinics	27.0	56.0	24.0	16.0	33.0
Vocational-Technical	27.0	60.0	15.0	22.5	31.5
Universities	25.0	59.5	21.5	24.5	30.5
Private Colleges	27.0	68.0	22.0	15.0	25.0
Consultant Groups	24.0	61.0	31.0	18.0	23.0
Professional Associations	26.8	56.5	19.5	15.0	29.5
Continuing Education	24.0	52.0	26.0	26.0	30.0
Long-term Care	20.0	61.0	18.0	16.0	29.0
School of Nursing	29.0	61.0	19.0	23.0	26.0
Total	278.7	654.8	233.2	218.0	321.6
Average	25.3	59.5	21.2	19.8	29.2

*Lower score, higher the motivation and satisfaction.

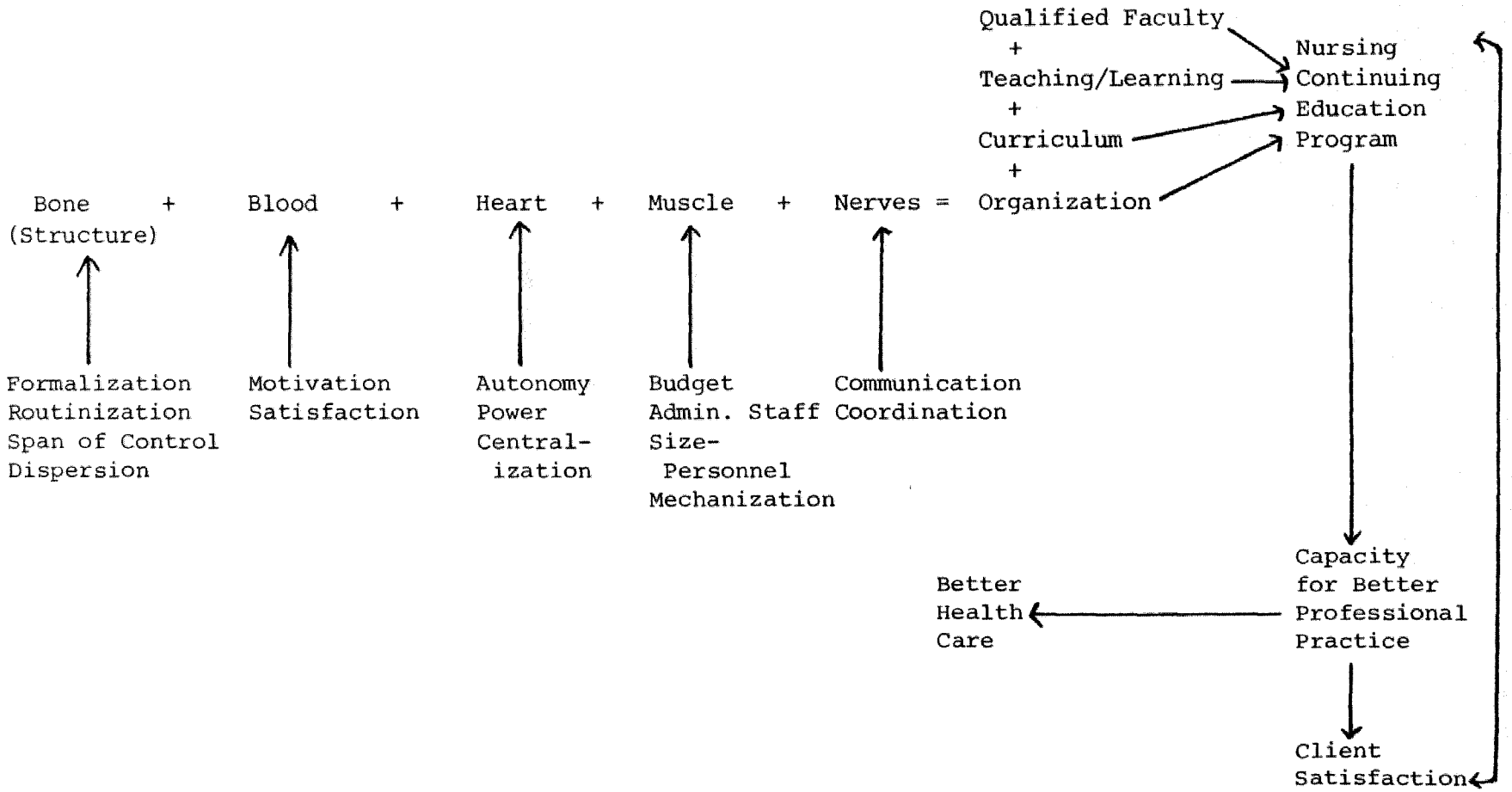

Figure 14. Figure showing the components (from most to least important) of an effective organization whose mission is nursing continuing education.

coordination). Multi-purposed organizations have the most amount of nerves (communication and coordination) and work (programming) and have the least blood (motivation) and power. Limited purposed organizations have the most amount of structure and the least amount of muscle (budget).

Table 125

Table Displaying the Mean for each of the Major Concepts for Multi, Limited and Single Purposed Organizations

Type of Organizational Group	Structure	Power	Nerves	Blood*	Muscle	Work
Multi	23.4	19.5	31.3	60.54	20.27	9.04
Limited	26.7	19.5	29.5	56.54	15.00	8.75
Single	28.5	28.5	26.5	56.50	22.00	8.00

*Lower score, higher value.

Implications and Conclusions

Implications

The main implication of this study is that all effective organizations as identified by the respondents in this study, have the identified components present in varying amounts. Therefore, the administrator in an organization whose mission is nursing continuing education would want to assess the organization for the presence of these variables and to maintain the presence of each of the variables.

Further, this finding supports each and every writer quoted in the literature review concerning the nature of organizations. The organization, as viewed by Mintzberg, Thompson, Perrow, Price and others, is a system, a wholistic entity, a living organism. The research confirms, empirically, that the functioning of these organizations supports the theoretical hypothesis of these various authors. The research also suggests that nursing continuing education operations are organizations first, specialized educational units second. Further, this means then that the entire body of organizational theory and management are directly applicable to nursing organizations dealing with continuing education. Therefore, a specialized body of knowledge and practice is not critical. Rather, the effective understanding and management of these organizations can be based upon a study of generic organizations. Thus, training of leaders in nursing continuing education and the upgrading of practitioners in the field can be gained from education schools, business schools, and/or public administrative schools. This research helped substantiate a generic theory of organization and management.

Conclusions

This study was a descriptive study, analyzing organizations whose mission is nursing continuing education. The main conclusion was that there are present, as defined by this researcher, identified components in effective

organizations which provided nursing continuing education.

Recommendations

1. Organizations which plan nursing continuing education programs should be assessed regularly to determine whether or not the various major components of the organization are present and that consideration for all aspects of the organization be managed. The most important components are structure as shown in formalization and the motivation of the director of the organization.

2. Nursing educators and administrators in planning an organization whose mission is nursing continuing education should consider all the variables that comprise an organization that were shown to be present in an effective organization.

3. When using Price's recommended tools, the researcher should use a wider scale (e.g., 1-10) to measure values on each variable. Most variables had a 1-5 range which did not provide for small differences among organizations.

For Further Research

Further research should include analyzing continuing education organizations that were not identified by the respondents in Phase I of this study. This population is known and could be assessed to see whether

or not these variables identified are also present and to what degree they are present.

Replication of this study in other states could be done to see whether nursing continuing education organizations in other states have a similar profile as was found in Iowa.

The variables and tools suggested by Price could be tested in other types of organizations to further refine and establish validity and reliability of the tools.

The conceptual model, "The Anatomy of an Organization," could be tested for validity and reliability using other types of organizations in Iowa and other geographical areas.

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APPENDIX A

NURSING CONTINUING EDUCATION QUESTIONNAIRE

PHASE I

NURSING CONTINUING EDUCATION QUESTIONNAIRE

PHASE I

Computer

I am doing a study of Nursing Education and of organizations which offer Nursing Continuing Education programs in the State of Iowa. (1-2)

1. Please indicate whether you live in a rural or urban setting: (3-5)

   [ ] Rural

   [ ] Urban (6)

During the year, April 1, 1979 to April 1, 1980 what was the Title of the Nursing Continuing Education program that you attended which was most valuable; which means--what program helped you to improve your nursing practice and/or improve your ability to perform in your nursing role?

2. Title of Program _____

_____ (7)

3. Briefly, describe this program _____

_____

_____ (8)

4. Describe briefly, in what way was this Nursing Continuing Education Program (Named in No. 2 above) helpful to you? (9)

5. What institution/organization offered the Nursing Continuing Education Program you indicated in Question #2? (10)

   Name of Institution/Organization

   _____

   Address _____
   (City) (State)

6. Approximately, what was the registration fee for the Nursing Continuing Education program you named? (Regardless of who paid)

(11)

(Check one)

[ ] under $20
[ ] $20-$40
[ ] $41-$60
[ ] $61-$80
[ ] $81-$100
[ ] $101-$120
[ ] $121-$140
[ ] Other - $ _____
[ ] Not Known

7. Was the program paid by the employer? (Check one)

(12)

[ ] All
[ ] None
[ ] Part

8. How many Continuing Education Units did you receive for the workshop you indicated in Question #2?

(13)

_____ CEU's

9. How long was the Continuing Education Program you indicated in Question #2: (Check one)

(14)

[ ] Hour(s)
[ ] Day(s)
[ ] Week(s)
[ ] Other _____
(please indicate)

10. Please check the box which describes you:

(15)

Basic Preparation (check one)

[ ] Diploma
[ ] Associate Degree
[ ] Baccalaureate

11. What is your highest additional education? (check one) _____ (16)

[ ] B.S.N.
[ ] M.A. _____ (Clinical specialty)
[ ] M.S.N. _____ (Clinical specialty)
[ ] Other _____ (Please specify)
[ ] None

12. What is your present position? (check one) _____ (17)

[ ] Staff Nurse
[ ] Head Nurse/Supervisor
[ ] Administrator
[ ] Educator
[ ] Other _____ (please indicate)
[ ] Unemployed

13. What type of nursing are you in? (check one) _____ (18)

[ ] Hospital
[ ] Community Health
[ ] Education
[ ] Other _____ (please indicate)
[ ] None

14. Are you employed full time (20 or more hours per week) or part time? (check one) _____ (19)

[ ] Full time
[ ] Part time
[ ] Not employed

15. Number of years in present position? (check one) _____ (20)

[ ] 0-3
[ ] 4-7
[ ] 8-11
[ ] Over 11 years

16. Number of years in nursing? (check one) (21)

[ ] 0-3
[ ] 4-7
[ ] 8-11
[ ] 12-15
[ ] 16-19
[ ] 20 and over

17. What is your opinion concerning the requiring of nursing continuing education regardless of who pays, or if you receive time off to attend (check one) (22)

_____ Should be required

_____ Should not be required

Thank you for your participation. (23)

Juanita Theile

(24)

APPENDIX B

CODE BOOK

CODE BOOK

Key to Responses
Nursing Continuing Education Questionnaire
Phase I

Variable	Column Number		Variable Name and Description
1	1-2	=	County number
2	3,4,5	=	Randomly selected element
3	6	=	1 = rural 2 = urban 9 = no response
4	7	=	1 = listed a program 2 = none helpful 3 = new graduate--does not need CEU 4 = not active RN anymore 9 = no response
5	8	=	1 = nursing 2 = nursing process 3 = management 4 = liberal arts 5 = teaching 6 = other 9 = no response
6	9	=	1 = helped get required CEU 2 = needed for job 3 = new information 4 = meet other professionals 5 = new insights for self 6 = improve nursing practice 7 = required for a degree 8 = other 9 = no response
7	10	=	1 = subarea 1 2 = subarea 2 3 = subarea 3 4 = subarea 4 5 = subarea 5 6 = out of state 7 = no address--not clearly indicated 8 = home study 9 = no response

Variable	Column Number		Variable Name and Description
8	11	=	1 = less than $20 2 = 21-40 3 = 41-60 4 = 61-80 5 = 81-100 6 = 101-120 7 = 121-140 8 = other 9 = no response
9	12	=	1 = all 2 = part 3 = none 9 = no response
10	13	=	1 = .1 - .3 2 = .4 - .6 3 = .7 - .9 4 = .9 - 1.1 5 = 1.1 - 1.5 6 = 1.6 - 1.7 7 = more than 1.7 9 = no response
11	14	=	1 = hours 2 = days 3 = weeks 4 = other 9 = no response
12	15	=	1 = diploma 2 = Associate degree in Nursing 3 = Baccalaureate in Nursing (BSN) 9 = no response
13	16	=	1 = BSN 2 = MA 3 = MSN 4 = other 5 = none 9 = no response
14	17	=	1 = staff 2 = head 3 = administrator 4 = other 5 = unemployed 6 = educator 9 = no response

Variable	Column Number		Variable Name and Description
15	18	=	1 = hospital 2 = community health 3 = education 4 = other 5 = none 9 = no response
16	19	=	1 = full time 2 = part time 3 = unemployed 9 = no response
17	20	=	1 = 0-3 2 = 4-7 3 = 8-11 4 = more than 11 5 = other 9 = no response
18	21	=	1 = 0-3 2 = 4-7 3 = 8-11 4 = 12-15 5 = 16-19 6 = more than 20 9 = no response
19	22	=	1 = should 2 = should not be 3 = other 9 = no response
20	23,24	=	Classification of Organization 1 = hospital 2 = community college 3 = clinic-care center 4 = voc-tech 5 = university 6 = private college 7 = consultants group 8 = prof. assoc. - NAACOG School INA IHA AAEN 9 = cont. ed. assoc. 10 = state dept. social services 11 = long-term care 12 = other 13 = none listed 14 = school of nursing

Variable	Column Number		Variable Name and Description
21	25,26, 27	=	Provider Number as Issued by State 200 = out of state 201 = none listed 202 = no provider number

APPENDIX C

FIRST LETTER TO PROSPECTIVE RESPONDENTS

FIRST LETTER TO PROSPECTIVE RESPONDENTS

Dear

I am a doctoral candidate studying organizations which offer Nursing Continuing Education in the state of Iowa.

Mandatory Nursing Continuing Education is in effect. Therefore, it is important that the programs which are offered achieve the intent of that law which is to help nurses to become/remain current in the nursing practice in order to be able to continue to give the best in nursing care.

You have been randomly selected from the registered nurses in Iowa. In order for the results to truly represent the thinking of the nurses in Iowa, it is important that each questionnaire be completed and returned by you. Please complete and return yours, today, if possible.

You may be assured of complete confidentiality. Each questionnaire contains an identification number for mailing purposes only. This is so that I may check your name off of the mailing list when your questionnaire is returned; your name will <u>not</u> be placed on the questionnaire. Furthermore, all results of this study will be published in such a way that answers on any single questionnaire cannot be identified.

The results of this research will be made available to all interested nurses. You may receive a summary of results by writing "copy of results requested" on the back of the return envelope, and printing your name and address below it. Please <u>do not</u> put this information on the questionnaire itself.

I shall be most happy to answer any questions you might have. Please write or call. The telephone number is 515-266-2651, Ext. 42.

Thank you for your assistance.

Sincerely,

Juanita R. Theile, R.N., M.S.N.
Head, Division of Nursing
Grand View College

APPENDIX D

SECOND LETTER TO NON-RESPONDENTS

SECOND LETTER TO NON-RESPONDENTS

Dear

About three weeks ago, I wrote to you seeking your opinion on Nursing Continuing Education and an organization which offered a program in nursing continuing education which you found to be helpful. As of today, I have not received your completed questionnaire.

I have undertaken this research as I believe it is critically important to have quality nursing continuing education. One of the important underlying factors in this quality is the organization which offers the program. Your opinion is important for me to have in order to identify organizations in this state which offer nursing continuing education programs which you have found valuable.

I am writing to you again because of the significance each questionnaire has to the usefulness of this study. Your name was drawn through a scientific sampling process in which every current registered nurse in the state of Iowa had an equal chance of being selected. This means that only about one out of every 20 registered nurses are being asked to complete this questionnaire. In order for the results to be truly representative of the opinions of registered nurses in the State of Iowa, it is essential that each nurse in the sample return their questionnaire. Thus, I would like to encourage you to complete and return yours today.

In the event you may have misplaced your questionnaire, I am enclosing a second copy.

Sincerely,

Juanita R. Theile

APPENDIX E

MONITORING QUESTIONNAIRE RETURN FORM

MONITORING FORM

QUESTIONNAIRE RETURNS

County #	Element #														3 wk.	6 wk.	Total

APPENDIX F

TABLE SHOWING THE COUNTY NUMBER, TOTAL NUMBER OF REGISTERED NURSES IN EACH COUNTY, NUMBER SELECTED FROM EACH COUNTY, NUMBER OF WRONG ADDRESSES, THE NUMBER OF RESPONSES IN EACH COUNTY, AND THE PERCENT OF RETURN FOR EACH COUNTY

County Number	County Name	Total RN's	Selected 5% of Total	Wrong Address	No Response	Number Returned	Percent of Return
1	Adair	31	1.5 = 2	1	0	1	50
2	Adams	21	1.0 = 1	0	1	0	0
3	Allamakee	90	4.5 = 5	0	1	4	80
4	Appanoose	58	2.9 = 3	0	0	3	100
5	Audubon	54	2.7 = 3	0	1	2	66.6
6	Benton	88	4.4 = 4	0	1	3	75
7	Black Hawk	912	45.6 = 46	1	16	30	65
8	Boone	191	9.5 = 10	0	0	10	100
9	Bremer	161	8.0 = 8	0	2	6	75
10	Buchanan	138	6.9 = 7	0	0	7	100
11	Buena Vista	147	7.3 = 7	1	0	6	85.7
12	Butler	82	4.1 = 4	0	0	4	100
13	Calhoun	125	6.2 = 6	0	3	3	50
14	Carroll	188	9.4 = 9	0	0	9	100
15	Cass	118	5.9 = 6	0	1	5	83.3
16	Cedar	97	4.8 = 5	0	0	5	100
17	Cerro Gordo	500	25	0	6	19	76
18	Cherokee	164	8.2 = 8	0	3	5	62.5
19	Chickasaw	76	3.8 = 4	0	1	3	75
20	Clarke	26	1.3 = 1	0	0	1	100
21	Clay	141	7.0 = 7	0	3	4	57.1
22	Clayton	87	4.3 = 4	0	0	4	100
23	Clinton	471	23.5 = 24	0	8	16	66.6
24	Crawford	108	5.4 = 5	0	1	4	80
25	Dallas	228	11.4 = 11	0	2	9	81.8
26	Davis	89	4.4 = 4	0	3	1	25
27	Decatur	48	2.4 = 2	0	1	1	50
28	Delaware	118	5.9 = 6	0	1	5	83.3
29	Des Moines	375	18.7 = 19	0	3	16	84.2
30	Dickinson	84	4.2 = 4	0	1	3	75
31	Dubuque	1064	53.2 = 53	0	16	37	69.8
32	Emmet	77	3.8 = 4	0	0	4	100
33	Fayette	121	6.0 = 6	0	2	4	66.6
34	Floyd	143	7.1 = 7	0	2	5	71.4
35	Franklin	77	3.8 = 4	0	0	4	100
36	Fremont	60	3	0	2	1	33.3
37	Greene	132	6.6 = 7	0	5	2	28.5
38	Grundy	83	4.1 = 4	0	0	4	100
39	Guthrie	61	3.0 = 3	0	2	1	33.3
40	Hamilton	118	5.9 = 6	0	1	5	83.3
41	Hancock	79	3.9 = 4	0	0	4	100
42	Hardin	158	7.9 = 8	0	3	5	62.5
43	Harrison	80	4	0	0	4	100
44	Henry	147	7.3 = 7	0	0	7	100
45	Howard	54	2.7 = 3	0	0	3	100

County Number	County Name	Total RN's	Selected 5% of Total	Wrong Address	No Response	Number Returned	Percent of Return
46	Humbolt	92	4.6 = 5	0	1	4	80
47	Ida	50	2.5 = 3	0	1	2	66.6
48	Iowa	103	5.1 = 5	0	1	4	80
49	Jackson	145	7.2 = 7	0	2	5	71.4
50	Jasper	174	8.7 = 9	0	2	7	77.7
51	Jefferson	98	4.9 = 5	0	1	4	80
52	Johnson	1687	84.3 = 84	2	26	56	66.6
53	Jones	102	5.1 = 5	0	0	5	100
54	Keokuk	104	5.2 = 5	0	2	3	60
55	Kossuth	121	6.0 = 6	0	0	6	100
56	Lee	286	14.3 = 14	0	7	7	50
57	Linn	1431	71.5 = 72	1	17	54	75
58	Louisa	48	2.4 = 2	0	1	1	50
59	Lucas	43	2.1 = 2	0	1	1	50
60	Lyon	46	2.3 = 2	0	0	2	100
61	Madison	67	3.3 = 3	0	2	1	33.3
62	Mahaska	105	5.2 = 5	0	0	5	100
63	Marion	230	11.5 = 12	0	2	10	83.3
64	Marshall	360	18	1	5	12	66.6
65	Mills	66	3.3 = 3	0	1	2	66.6
66	Mitchell	87	4.3 = 4	0	1	3	75
67	Monona	84	4.2 = 4	0	0	4	100
68	Monroe	47	2.3 = 2	0	2	0	0
69	Montgomery	89	4.4 = 4	0	1	3	75
70	Muscatine	222	11.1 = 11	0	1	10	90.9
71	O'Brien	93	4.6 = 5	0	1	4	80
72	Osceola	42	2.1 = 2	0	0	2	100
73	Page	101	5.0 = 5	0	0	5	100
74	Palo Alto	110	5.5 = 6	0	2	4	66.6
75	Plymouth	208	10.4 = 10	0	3	7	70
76	Pocahontas	87	4.3 = 4	0	1	3	75
77	Polk	2888	144.4 = 144	6	43	95	65.9
78	Pottawat-tamie	614	30.7 = 30	0	10	20	66.6
79	Poweshiek	121	6.0 = 6	0	3	3	50
80	Ringgold	26	1.3 = 1	0	0	1	100
81	Sac	109	5.4 = 5	0	0	5	100
82	Scott	1232	61.6 = 62	0	15	47	75.8
83	Shelby	112	5.6 = 6	0	2	4	66.6
84	Sioux	189	9.4 = 9	0	5	4	44.4
85	Story	535	26.7 = 27	1	8	18	66.6
86	Tama	107	5.3 = 5	0	3	2	40
87	Taylor	29	1.4 = 1	0	0	1	100
88	Union	74	3.7 = 4	0	1	3	75
89	Van Buren	32	1.6 = 2	0	0	2	100
90	Wapello	280	14.0 = 14	0	8	6	42.8

County Number	County Name	Total RN's	Selected 5% of Total	Wrong Address	No Response	Number Returned	Percent of Return
91	Warren	252	12.6 = 13	0	2	11	84.6
92	Washington	190	9.5 = 10	0	2	8	80
93	Wayne	32	1.6 = 2	0	0	2	100
94	Webster	427	21.3 = 21	1	3	17	80.9
95	Winnebago	79	3.9 = 4	0	3	1	25
96	Winneshiek	135	6.7 = 7	0	1	6	85.7
97	Woodbury	1072	53.7 = 54	2	14	38	70.3
98	Worth	54	2.7 = 3	0	2	1	33.3
99	Wright	91	4.5 = 5	0	2	3	60.0
Total Population		22,681	Sample = 1134	7 .6%	321 28.4%	813	71.6%

APPENDIX G

TABLE SHOWING THE DAILY RATE, TOTAL NUMBER, AND THE PERCENT OF RETURNS OF QUESTIONNAIRE IN PHASE I OF THE RESEARCH

Date	Number of Returns Received on this Date	Total Number of Returns	Percent of Total
6/10	5	5	0.4
6/11	116	121	10
6/12	77	198	17
6/13	90	288	26
6/16	98	386	34
6/17	45	431	38
6/18	26	457	40
6/19	16	473	41
6/20	16	489	43
6/23	25	514	45
6/24	10	524	46
6/25	19	543	48
6/26	5	548	48
6/27	5	553	49
*6/28 - 2nd Questionnaire sent to non-respondents			
6/30	17	570	50
7/1	46	616	54
7/2	43	659	58
7/3	25	684	60
7/7	51	735	65
7/8	15	750	66
7/9	14	764	67
7/10	10	774	68
7/11	12	786	69
7/14	21	807	71
7/15	6	813	72
Cut-off Date			

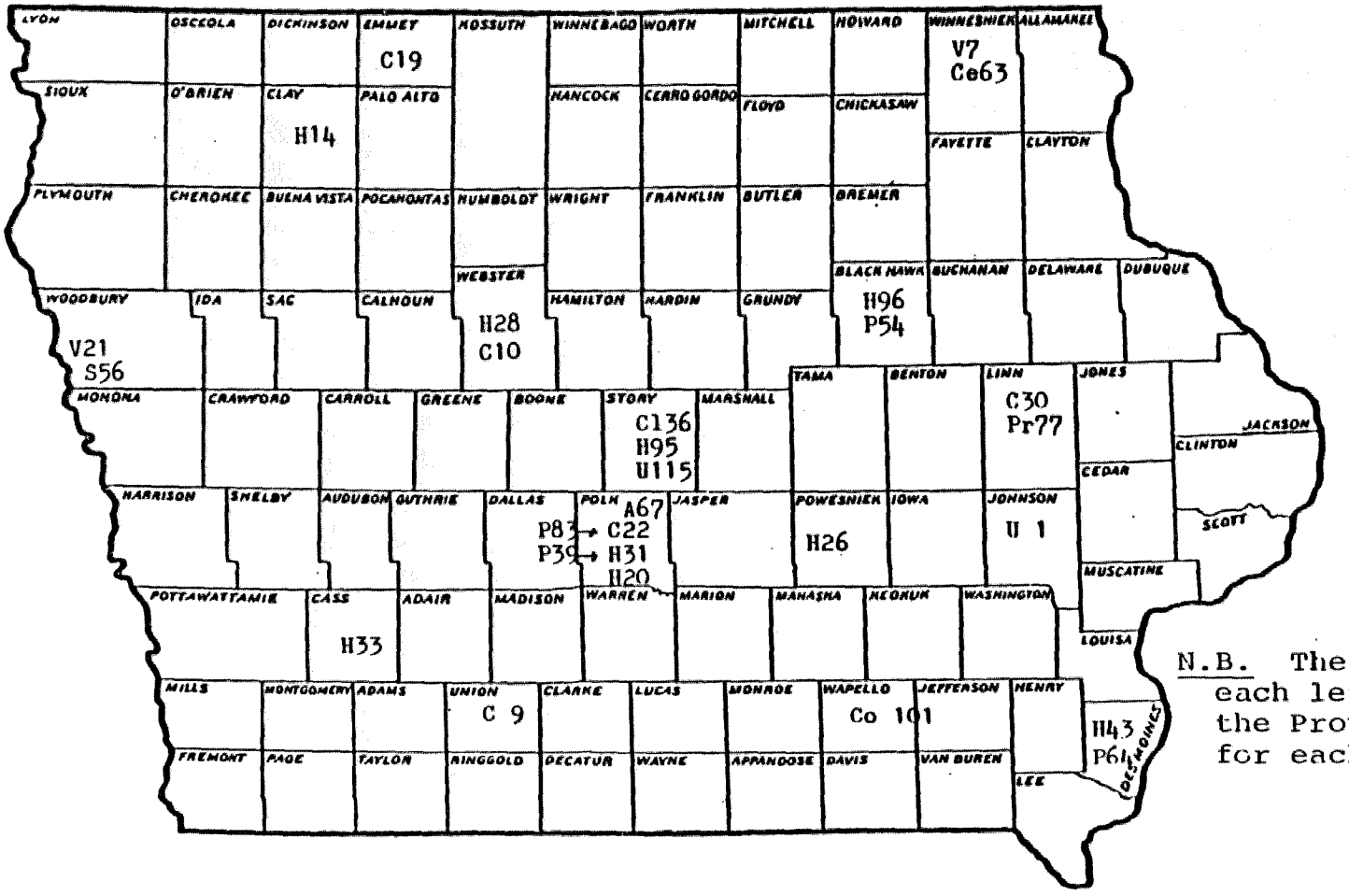
APPENDIX H

TABLE SHOWING THE DAILY RATE OF RETURNS, TOTAL NUMBER AND THE PERCENT OF RETURNS OF QUESTIONNAIRES IN PHASE I OF RESEARCH AND NOT INCLUDED IN STUDY AS RETURNS WERE RETURNED AFTER CUT-OFF DATE

Date	Number of Returns Received on this Date	Total Number of Returns	Percent of Total
7/16	12	825	73
7/17	4	829	73
7/18	3	832	73
7/25	21	853	75
7/31	1	854	75
8/1	1	855	75
8/4	1	856	75

APPENDIX I

MAP OF IOWA SHOWING THE GEOGRAPHICAL DISTRIBUTION OF ORGANIZATIONS SELECTED FOR PHASE II OF THE STUDY



N.B. The number by each letter code is the Provider Number for each organization.

Figure showing the geographical distribution of organizations selected for Phase II of the study. Where: H=hospital; C=Community College; P=Professional Association; U=University; V=Vocational-Technical College; Co=Consultant Group; Pr=Private College; Ce=Continuing Education Association; S=Diploma School of Nursing; A=Long-term Care; Cl=Clinic.

APPENDIX J

INTERVIEW TOOL FOR PHASE II OF STUDY

INTERVIEW DATA

FORM

Institution Name _____ Code Number _____

Address _____

Phone of Institution _____

Date of Interview _____

Interviewee's Name _____

Position _____

Phone Number of Interviewee _____

INTERVIEW TOOL

Variable 1

_____ Date of Interview _____ Code # _____

(1,2,3) Prologue:

1. I am an R.N. working toward a doctorate in Education at Drake University.

2. I am studying organizations whose mission is Nursing Continuing Education.

3. The study has two phases: Phase I - questionnaire to 1134 nurses asked which continuing education program most valuable and which organization provided it.

4. The organizations thus identified were listed by type and a random sample was selected for Phase II of study.

5. Your organization was identified by the nurse and randomly selected by me.

6. May I have your permission to interview you? The interview takes 30-40 minutes. All information is confidential. No organization or individual will be named in the report.

7. If acceptable, draw four rectangles on scrap paper (tell how to make scales on page 18, 19). These will be referred to as Card #1, 2, 3 and 4.

8. Complete Interview Data Sheet.

1. Formalization - the degree to which the norms of a social system are explicit.

Price, p. 107*

I'm going to read a series of statements that may or may not be true for your job in (organization). For each item I read, please answer as it applied to you and your organization; using the answer categories on this card (use Card #1).

___ 1. First, you feel that you are your own boss in most matters.

___ 2. People can make their own decisions without checking with anybody else.

Job Codification	___ 3.	The person doing the work determines how things are done.
	___ 4.	People are allowed to do almost as they please.
	___ 5.	Most people make their own rules on the job.
Rule Observation	___ 6.	The employees are constantly being monitored for rule violations.
	___ 7.	People feel as though they are constantly being watched to see that they obey all the rules.
Rule Manual	___ 8.	There is no rule manual.
Job Description	___ 9.	There is a complete written job description for your job.
	___10.	Whatever situation arises, there are procedures to follow in dealing with it.
Specificity of Job	___11.	Everyone has a specific job to do.
	___12.	Going through the proper channels is constantly stressed.
Description	___13.	A written record of employee job performance is kept by the organization.
	___14.	Employees are to follow strict operating procedures at all times.
	___15.	Whenever employees have a problem, they are to go to the same person for an answer.

$\frac{15}{X} =$ _____

Price, p. 109

_____ Variable 2 - N.B. The lower the mean the higher the formalization.
(4)

Obtain copies of the following documents if possible.

_____ 1. Written contract for different levels:
Non = 1, Written = 2

_____ 2. Information booklets - Handbook for employees
total # topics: None = 1

_____ 3. Organizational Chart
Copies are given to: None = 1, All = 4

_____ 4. Written operating instructions for equipment?
Not available = 1, Available = 2

_____ 5. Job descriptions - Not provided = 1, Provided = 2

_____ 6. Manual of procedures - None = 1, Manual = 2

_____ 7. Written policies - None = 1, W. Policies = 2

_____ 8. Written workflow - PERT. None = 1, Chart = 2

_____ 9. Written philosophy - None = 1, Available = 2

Price, pp. 112, 113

_____ Variable 3 - Computation: The larger the score the greater the formalization
(5,6)

---

2. Size of Organization - The scale of operation of a social system and is indicated by the number of people employed in [Nursing Continuing Education, the amount of money budgeted for Nursing Continuing Education].

Price, p. 174

1. Number of personnel (with college degree) who are full time in nursing continuing education.

___1 - 0

___2 - 1-2

___3 - 3-4

___4 - 5-6

___5 - 7-8

___6 - 9-10

___7 - above 10

_____ Variable 4.
(7)

---

2. The amount of the annual budget for nursing continuing education.

___1 $0
___2 $1-$5,000
___3 $6,000-$10,000
___4 $11,000-$15,000
___5 $16,000-$20,000
___6 Above $20,000
___7 No response

_____ Variable 5
(8)

---

3. Administrative Staff - full-time or part-time career members of this (organization) who primarily perform the activities that indirectly contribute to its primary output. This is administrative staff, secretaries, clerk-typists who are not nurses.

___1 no one

___2 only part time

___3 1-2 full time

___4 3-5 full time

___5 6-8 full time

___6 9-11 full time

___7 12+ full time

_____ Variable 6
(9)

---

4. Autonomy - the degree to which a social system has power with respect to its environment.

Price, p. 136

Is authority inside or outside the CE Organization? Please answer yes or no.

Yes = 1 No = 0

___ 1. Appointment of staff from outside the organization (external recruitment).

___ 2. Promotion of staff.

___ 3. Salaries of staff.

___ 4. Dismissal of staff.

___ 5. Determination of the C E Program.

___ 6. Determination of where C E Programs will be offered.

___ 7. The extent and type of market to be aimed for.

___ 8. The fee for the C E workshop.

___ 9. What type, or what brand, new equipment is to be.

___10. Which suppliers of materials are to be used.

___11. Buying procedures.

___12. Training methods of new staff.

___13. What and how many welfare facilities are to be provided.

___14. To spend unbudgeted or unallocated money on capital items.

___15. To spend unbudgeted or unallocated as current expenditure.

___16. To alter responsibilities/areas of work of staff.

___17. Creation of a new department.

___18. Creation of a new job.

Price, pp. 38, 39

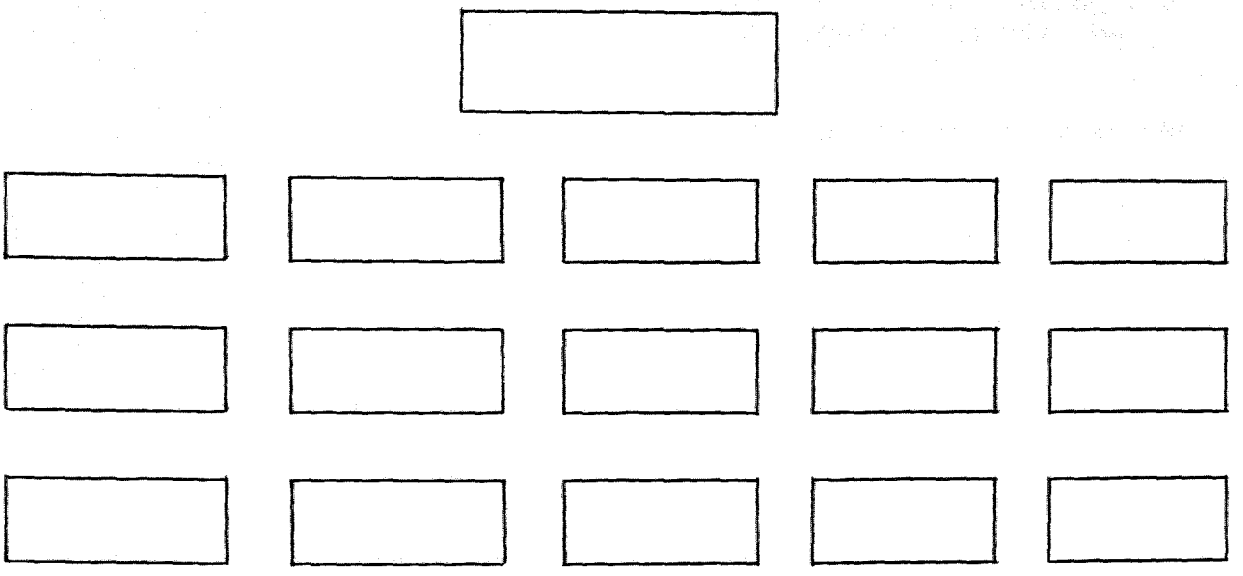
_____ Variable 7
(10,11)

Computation 1 = Yes, 0 = No

Higher Score = more decisions within organization.

5. Span of Control - refers to the number of members managed by the average administrator.

There is an empty organization chart. Tell me the name of position I should write in each blank. Top line, first line below, 2nd line, 3rd line.



Price, p. 182

_____ Variable 8 - Computation: Subordinates listed are counted.
(12)

---

6. Power - refers to the degree to which an individual has the capacity to obtain performance from other individuals.

Price, p. 145

Write the letters A-E on your scrap paper. I will read five reasons generally given by people when they are asked why they do the things their superiors suggest or want them to do. As I read these, you number them on your scrap paper by each letter according to their importance to you as reasons for doing the things your academic dean/hospital administrator suggests or wants you to do. Give rank "1" to the most important factor, "2" to the next, etc. Use each number only one time. I will read them twice.

___ A. You respect the individual personally, and want to act in a way that meets the respect and admiration of the individual.

___ B. You respect the competence and judgment of the individual about things with which the person is more experienced than you are.

___ C. That person can give special help and benefits to those who cooperate with the individual.

___ D. That person has a legitimate right, considering the position, to expect that the suggestions will be carried out.

___ E. That person can apply pressure or penalize those who do not cooperate.

Five Bases of Power Price, p. 146

(1) A = referent
(2) B = expert
(3) C = reward
(4) D = legitimate
(5) E = coercive

(13) _____ Variable 9

Computation: Scores are assigned by interviewee. Record ranking for each question. Lowest score indicates type of Power Base Operative.

---

7. Centralization - the degree to which power is concentrated in a social system.

Price, p. 43

Participation Using Card #2, please respond to the following statements.

___ 1. How frequently do you usually participate in the decision to hire new staff?

___ 2. How frequently do you usually participate in the decisions on the promotion of any of the professional staff?

___ 3. How frequently do you participate in decisions on the adoptions of new policies?

___ 4. How frequently do you participate in the decisions on the adoptions of new programs?

Price, p. 45

(14) _____ Variable 10

Computation: Compute mean score and record. The lower the score, the higher the degree of power in the organization.

---

8. Hierarchy of Authority - Using Card #1 respond to the following statements.

___ 1. There can be little action taken here until a supervisor approves a decision.

___ 2. A person who wants to make his own decisions would be quickly discouraged.

___ 3. Even small matters have to be referred to someone higher up for final decision.

___ 4. You have to ask your boss before you do anything.

___ 5. Any decision you make has to have your boss' approval.

Price, pp. 45, 46

(15) _____ Variable 11

Computation: Record mean score on Hierarchy of Authority

---

9. Dispersion - the degree to which the membership of an organization is spatially distributed.

Price, p. 90

___ (1) All personnel at one site.

___ (2) Less than 25% of staff at one site.

___ (3) Less than 50% of staff at one site.

___ (4) More than 75% of staff at one site.

___ Total of personnel (professional and staff).

(16) _____ Variable 12

Computation: Record response (1-4).

---

10. Coordination - Is the degree to which each of the various interdependent parts of an organization operates according to the requirements of the other parts and the total system.

Price, p. 84.

Using Card #2 respond to the following questions:

___ 1. How well do the different jobs and work activities associated with a given workshop fit together, or how well are all things geared in the direction of having an excellent workshop?

___ 2. To what extent do the people from various interrelated departments make an effort to avoid creating problems or interference with each other's duties and responsibilities?

___ 3. To what extent do people from different departments who have to work together do their job properly and efficiently without getting in each other's way?

___ 4. To what extent are all related things and activities well timed in the everyday work in the continuing education office?

___ 5. In your opinion, to what extent has the organization been able to achieve singleness of direction in the efforts of its many groups, departments, and individuals?

Price, pp. 85-87

(17) Variable 13

Computation: Score - Compute total score on questions 1-4 and obtain mean and record (coordination).

(18) Variable 14 Score - Record score on question 5 (reliability).

11. Communication - is the degree to which information is transmitted among the members of an organization.

Price, p. 58

Using Card #3 respond to the following questions:

Adequacy/Communication

_____ (19) Variable 15. A. In general, how do you feel about the kind of communication which you receive from your immediate superior?

_____ (20) Variable 16

Amount of Communication

B. On the whole, what is the average amount of time per week you talk with your immediate supervisor?

___ I usually talk with my immediate superior less than 1/4 hour per week. (1)

___ Between 1/4 and 1/2 hour per week. (2)

___ Between 1/2 and 1 hour per week. (3)

___ Between 1 and 2 hours per week. (4)

___ Between 2 and 4 hours per week. (5)

___ I usually talk with my immediate supervisor more than 4 hours per week. (6)

Price, p. 60

_____ (21) Variable 17

Qualitative Aspects of Communication - Using Card #2 respond to the following questions:

___ C. How often does your immediate superior express appreciation for your work?

---

(22) _____ Variable 18

Formal Communication - Using Card #2 respond to the following statements:

D. How often does your immediate superior talk to you in the following ways.

___ 1. Shows appreciation for your work, shows confidence in you.

___ 2. Gives you directions or orders.

___ 3. Explains things or gives information and suggestions.

___ 4. Asks for your suggestions or opinions.

___ 5. Asks for information, explanation or clarification.

___ 6. Criticizes you, refuses to help or is unnecessarily formal.

___ 7. Gives unnecessary information or comments.

Price, pp. 61, 62

(23) _____ Variable 19

Informal Communication:

E. When people work together they talk about their work, their personal interests, and other things which may or may not be related to the job. And, usually people talk more with certain persons than with others. Think of that person in this organization with whom you talk the most.

1. What is the average amount of time per week you talk with this person while on the job.

___ I usually talk with this person less than 1/2 hour per week. (1)

___ Between 1/2 hour and 1 hour. (2)

___ Between 1 and 2 hours per week. (3)

___ Between 2 and 4 hours per week. (4)

___ Between 4 and 6 hours per week. (5)

___ I usually talk with this person more than 6 hours per week. (6)

Price, p. 62

_____ Variable 20
(24)

2. What position in the organization does this person with whom you talk most frequently have?

___ This person has a position lower than mine. (1)

___ This person has a position at the same level as mine. (2)

___ This person is my immediate supervisor. (3)

___ This person has a higher position than mine but is not my immediate supervisor. (4)

Price, p. 63

Frequency

3. How often do you usually talk with this person about each of the following areas?

1	2	3	4	5
Once a month or less often	Two or three times a month	About once a week	Several times a week	Once a day or more often

_____ Variable 21
(25)

___ 1. Ways in which Cont. Ed. could be improved.

_____ Variable 22
(26)

___ 2. Ways in which Cont. Ed. Coord. could be improved.

_____ Variable 23
(27)

___ 3. Employee wages, hours or benefits.

_____ Variable 24
(28)

___ 4. Ways in which working relations between departments could be improved.

_____ Variable 25
(29)

___ 5. Ways in which satisfaction or morale among staff could be improved.

_____ Variable 26
(30)

___ 6. Things, people, or happenings outside of the organization.

Price, pp. 62, 63

Computation

A. Adequacy of Communication

1.1 Score 1 appropriate -- 5 inappropriate

1.2 Record score.

B. Amount of Communication

2.1 Score 1/4 less as 1; more than 4 as 6.

2.2 Record score.

C. Qualitative

3.1 Score Always as 1; never as 5.

3.2 Record score.

D. Formal

4.1 Score Always as 1; never as 5.

4.2 Compute mean.

E. Informal

1 Score "I usually less 1/2 hour" as 1 "More than 6 hours" as 6

Record score

2 Position score "Position lower" as 1
Higher position - not
immediate supervisor as 4

3 Frequency Record score "once a
month" as 1; "once a day"
as 5

---

12. Effectiveness - is the degree to which an organization achieves its goals...performs and has organizational success.

Price, p. 101

Variable 27

(31)

A. Number of programs offered annually

___ (1) 1-5 programs

___ (2) 6-10 programs

___ (3) 11-15 programs

___ (4) 16-20 programs

___ (5) Over 20 programs

Variable 28

(32)

B. Average number of participants at each workshop

___ (1) 1-50 participants

___ (2) 51-100 participants

___ (3) 101-150 participants

___ (4) 151-200 participants

___ (5) Over 200 participants

Variable 29

(33)

C. Average length of workshop

___ (1) up to 1/2 day

___ (2) 1-2 days

___ (3) 3-4 days

___ (4) Over 4 days

(34) _____ Variable 30

D. Average cost of workshops

___ (1) 0-$20
___ (2) $21-40
___ (3) $41-60
___ (4) $61-80
___ (5) $81-100
___ (6) $101-120
___ (7) $121-140
___ (8) Over $140

Record score for each part.

Other Notes:

---

13. Mechanization - is the degree to which an organization uses inanimate sources of energy/mechanization.

Price, p. 129

A. Use of Computer

B. Use of Public television for continuing education programs.

C. Use of video taping

D. Word Processor

E. Microfilm

F. Other A/V:

16 mm	Tape recorder
Overhead	Video player
Slide projector	Film strip viewer

(35,36) _____ Variable 31

Computation: Record score: 0 = none
2 = use

---

14. Motivation: is the degree to which members of an organization are willing to work.

Price, p. 137

Using Card #1 respond to the following statements:

___ 1. You'll stay overtime to finish a job, even if you are not paid for it.

___ 2. A person can be measured on how well a job is done.

___ 3. The major satisfaction in your life comes from your job.

___ 4. For you, mornings at work really fly by.

___ 5. You usually show up for work early, to get things ready.

___ 6. The most important things that happen to you involve your work.

___ 7. Sometimes you lay awake at night thinking ahead to the work of the next day.

___ 8. You are a perfectionist about your work.

___ 9. You feel depressed when you fail at something connected with your job.

___10. You have other activities more important than your work.

___11. You live, eat, and breathe your job.

___12. You would probably keep working even if you did not need the money.

___13. Quite often you feel like staying home from work instead of going to work.

___14. To you, your work is only a small part of who you are.

___15. You are very much involved personally in your work.

___16. You avoid taking on extra duties and responsibilities in your work.

___17. You used to be more ambitious about your work than you are now.

___18. You believe that most things in life are more important than work.

___19. You used to care more about your work, but now other things are more important to you.

___20. Sometimes you are very disappointed for the mistakes you make in your work.

Price, p. 138

(37,38,39) Variable 32

Computation: Sum total scores
Higher the score, the lower the involvement.

---

15. Satisfaction: is the degree to which members of the organization have a positive affective orientation toward membership in the system.

Price, p. 156

Using Card #4 respond to the following statements:

	How much is there now? (a)	How much should there be? (b)	How important is this to you? (c)	
___1				1. The feeling of self-esteem a person gets from being in your management position.
___2				2. The authority connected with your management position.
___3				3. The opportunity for personal growth and development in your management position.
___4				4. The prestige of your management position inside the organization, that is the regard received from others in the organization

	How much is there now? (a)	How much should there be? (b)	How important is this to you? (c)	
___5				5. The opportunity for independent thought and action in your management position.
___6				6. The feeling of security in your management position.
___7				7. The feeling of self-fulfillment a person gets from being in your management position (that is, the feelings of being able to use your own unique capabilities, realizing your potential).
___8				8. The prestige of your management position outside the company (that is the regard received from others not in the company).
___9				9. The feeling of worthwhile accomplishment in your management position.
___10				10. The opportunity, in your management position, to give help to other people.
___11				11. The opportunity, in your management position, for participating in the setting of goals.

	How much is there now? (a)	How much should there be? (b)	How important is this to you? (c)	
___12				12. The opportunity to develop close friendships in your management position.

Price, p. 162

Variable 16

Computation: Score each item by subtracting A response from B response. The lower the score the higher the satisfaction.

_____ Variable 33
(40)

___ Security = Question #6

_____ Variable 34
(41)

___ Social = Mean of questions #10 and #13

_____ Variable 35
(42)

___ Esteem = Mean of questions 1, 4, and 8

_____ Variable 36
(43)

___ Autonomy = Mean of questions 2, 5, and 11

_____ Variable 37
(44)

___ Self-Realization = Mean of questions 3, 7 and 9

Other Notes:

_____

16. Routinization: is the degree to which role performance in an organization is repetitive.

Price, p. 150

Please answer the following questions:

___ 1. Would you describe your job as being highly routine (1), somewhat routine (2), somewhat non-routine (3), or highly non-routine (4).

___ 2. I'm going to read a series of statements that may or may not be true for your job at _____. For each item I read, please use Card #1.

___2.1 People here do the same job in the same way every day.

___2.2 One thing people like here is the variety of work.

___2.3 Most jobs have something new happening every day.

___2.4 There is something different to do every day.

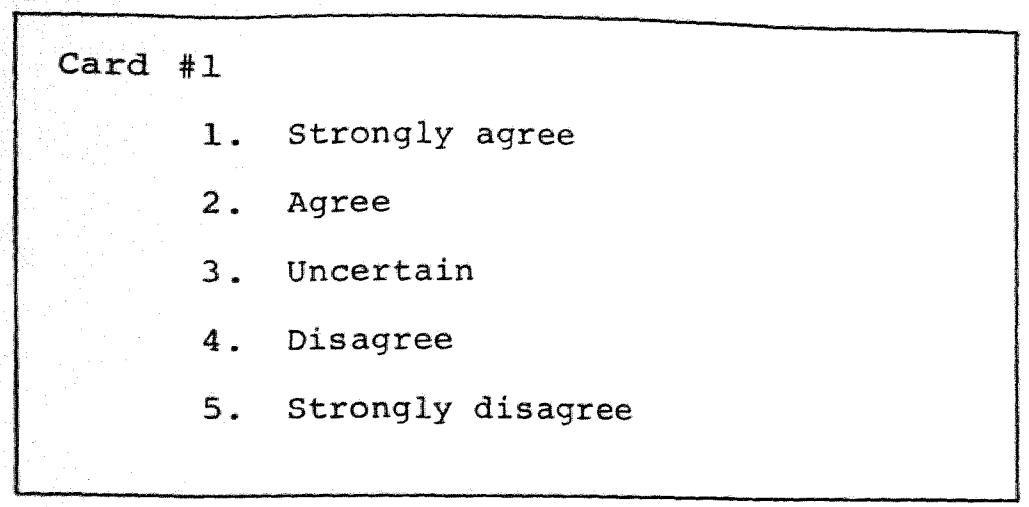
Price, pp. 151, 152

_____ Variable 38
(45)

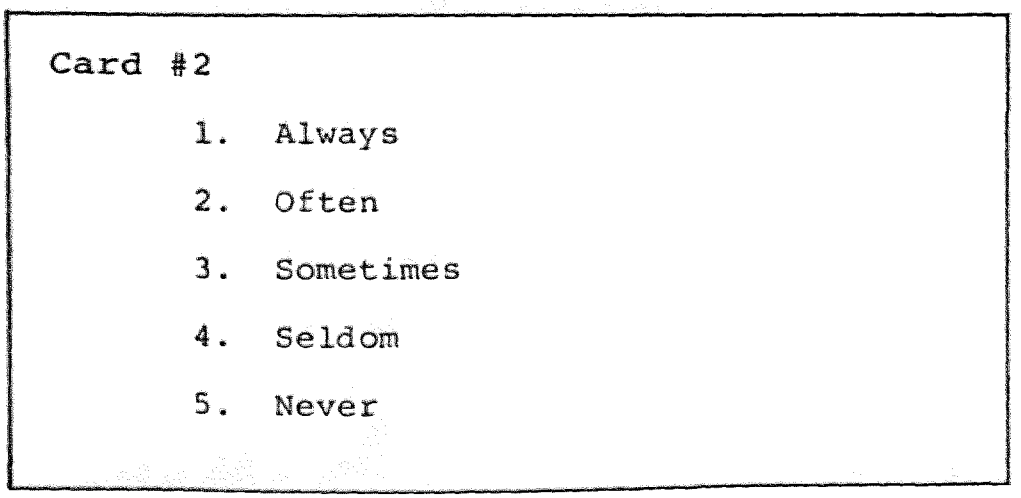
Computation:

1. Score highly routine as 1--highly non-routine as 4
2. Score question #2 as indicated on Card #1
3. Compute mean
4. Record mean

Card #1


Card #1
1. Strongly agree
2. Agree
3. Uncertain
4. Disagree
5. Strongly disagree

Card #2


Card #2
1. Always
2. Often
3. Sometimes
4. Seldom
5. Never

Card #3

Card #3

1. Appropriate
2. Often appropriate
3. Uncertain
4. Seldom appropriate
5. Inappropriate

Card #4

Card #4

1. None
2.
3.
4.
5. A lot

Thank you very much for your time. A report will be ready in November/December. Would you like a copy of the results?

Thank you again.

APPENDIX K

CODE BOOK FOR INTERVIEW TOOL

CODE BOOK - INTERVIEW

Variable Number	Column Number	Range Possible	Variable Name and Description
1	1,2,3,4	1-200	Organization Each identified and selected organization will have a code number. 1-13 Type of Organization, 1-10 Elements
2	5	1-6	Degree of Formalization Mean Value Recorded
3	6,7	1-18	1 - none 2 - available
4	8	1-7	Size - Number of personnel in Continuing Education 1 - 0 2 - 1-2 3 - 3-4 4 - 5-6 5 - 7-8 6 - 9-10 7 - Above 10
5	9	1-6	Size - Budget for Continuing Education 1 - $0 2 - $0-$5,000 3 - $6,000 - $10,000 4 - $1,000 - $15,000 5 - $16,000 - $20,000 6 - Above $20,000 7 - No response
6	10	1-7	Administrative Staff 1 - no one 2 - only part time 3 - 1-2 full time 4 - 3-5 full time 5 - 6-8 full time 6 - 9-11 full time 7 - 12+ full time

Variable Number	Column Number	Range Possible	Variable Name and Description
7	11,12	1-20	Autonomy - Total Score
8	13	1-6	Span of Control has capacity to get others to work (including Sec. and faculty) 1 - Has no staff 2 - Has 2-3 3 - Has 4-5 4 - Has 6-7 5 - Has 8-9 6 - Has 10 or more
9	14	1-5	Power 1 - A Record letter value 2 - B with most important 3 - C factor (#1) 4 - D 5 - E
10	15	1-5	Centralization Participation = mean score
11	16	1-5	Hierarchy - mean score
12	17	1-3	Dispersion 1 - all personnel at one location 2 - less than 25% staff at one site 3 - more than 50% at one site 4 - more than 75% at one site Total number of personnel
			Coordination
13	18	1-5	Coordination mean score
14	19	1-5	Reliability mean score
			Communications
15	20	1-5	A. Adequacy
16	21	1-6	B. Amount
17	22	1-5	C. Qualitative
18	23	1-7	D. Formal
19	24	1-6	E. (1) Informal
20	25	1-4	(2) Position in Organization
		1-5	(3) Frequency

Variable Number	Column Number	Range Possible	Variable Name and Description
			Informal Communication
21	26	1-5	1 - Cont. Ed. improved
22	27	1-5	2 - Coord. improved
23	28	1-5	3 - Employee benefits
24	29	1-5	4 - Working relations
25	30	1-5	5 - Morale
26	31	1-5	6 - Outside events
27	32	1-5	A. Effectiveness - Number of Programs 1 - 1-5 programs annually 2 - 6-10 programs annually 3 - 11-15 programs annually 4 - 16-20 programs annually 5 - Over 20 programs annually
28	33	1-5	B. Effectiveness - Participants Average # participating at one workshop 1 - 1-50 participants 2 - 51-100 3 - 101-150 4 - 151-200 5 - Over 200
29	34	1-4	C. Effectiveness Average length of workshop 1 - 1/2 day 2 - 1-2 days 3 - 3-4 days 4 - Over 4 days
30	35	1-8	D. Effectiveness Average Cost 1 - $0-$20 2 - $21-40 3 - $41-60 4 - $61-80 5 - $81-100 6 - $101-120 7 - $121-140 8 - Over $140
31	36,37	1-20	Mechanization Total score for all mechanization

Variable Number	Column Number	Range Possible	Variable Name and Description
32	38,39,40	1-100	Motivation
			Total score
			Satisfaction
33	41	1-6	Security
34	42	1-10	Social
35	43	1-45	Esteem
36	44	1-20	Autonomy
37	45	1-15	Self-realization
38	46	1-4	Routinization

APPENDIX L

PERMISSION FROM PUBLISHER

December 18, 1979

Ms. Juanita R. Theile
Route 4
Indianola, Iowa 50125

Dear Ms. Theile:

In response to your letter of November 26, you may use the listed material from our Price, HANDBOOK OF ORGANIZATIONAL MEASUREMENT in your dissertation. This permission is for one-time use only, and does not extend to publication or to any other commercial use.

Cordially,

Eugene R. Bailey
Manager of Production and
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